

104(e) Response
 Portland General Electric – Rivergate North and South Substations (April 30, 2009)

.EPA Question	Response	Records/Information Available
Section 1.0 - Respondent Information		
1. Provide the full legal, registered name and mailing address of Respondent.	Portland General Electric Company 121 SW Salmon Street Portland, OR 97204	
2. For each person answering these questions on behalf of Respondent, provide:		
Site Operator: Portland General Electric		
a. full name;	Arya Behbehani-Divers	
b. title;	Manager, Environmental Services	
c. business address; and	121 SW Salmon Street m/s 3WTCBR05 Portland, OR 97204	
d. business telephone number, electronic mail address, and FAX machine number.	Business Telephone Number: 503-464-8141 Electronic Mail Address: Arya.Behbehani-Divers@pgn.com Fax Number: 503-464-8527	
Site Consultant: URS Corporation		
a. full name;	Laura McWilliams, PhD, LG; Danni Kline	
b. title;	Senior Geologist; Ecologist	
c. business address: and	111 SW Columbia, Suite 1500 Portland, OR 97225-5850	
d. business telephone number, electronic mail address, and FAX machine number.	Business Telephone Number: 503-222-7200 Electronic Mail Addresses: Laura_McWilliams@urscorp.com; Danni_Kline@urscorp.com Fax Number: 503-222-4292	
3. If Respondent wishes to designate an individual for all future correspondence concerning this Site, please indicate here by providing that individual's name, address, telephone number, fax number, and, if available, electronic mail address.	Arya Behbehani-Divers Portland General Electric Manager, Environmental Services 121 SW Salmon Street - 3WTCBR05 Portland, OR 97204 Tel: 503-464-8141 Fax: 503-464-8527 Electronic Mail Address: Arya.Behbehani-Divers@pgn.com	
Section 2.0 - Owner/Operator		

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<p>4. Identify each and every Property that Respondent currently owns, leases, operates on, or otherwise is affiliated or historically has owned, leased, operated on, or otherwise been affiliated with within the Investigation Area during the period of investigation (1937 to Present). Please note that this question includes any aquatic lands owned or leased by Respondent.</p>	<p>Portland General Electric Company (PGE) is preparing separate 104(e) responses for properties within the Investigation Area. This response only applies to the Rivergate Substations (Rivergate North Substation located at 8920 N. Time Oil Rd and Rivergate South Substation located at 8849 N. Burgard Way, Portland, Oregon) and adjacent historically owned parcels.</p> <p>As shown in the attached plat (Q04a_RivergatePlat1.pdf), this response includes two parcels currently owned by PGE and two parcels historically owned by PGE. These are referred to herein as Parcels I, II, III, and IV and are described as follows:</p> <p style="padding-left: 40px;">Parcel I – the currently owned, developed parcel that includes the majority of the Rivergate North Substation and the northern part of the Rivergate South Substation.</p> <p style="padding-left: 40px;">Parcel III – the currently owned, developed parcel that includes a portion of Rivergate North Substation and the majority of Rivergate South Substation.</p> <p style="padding-left: 40px;">Parcel II – the historically owned, undeveloped parcel south of Parcel I.</p> <p style="padding-left: 40px;">Parcel IV – the historically owned, undeveloped parcel south of Parcel III.</p> <p>As defined herein, “the site”, “the property”, “the facility”, “the substations,” and “Rivergate Substations” all refer exclusively to Parcels I and III (Rivergate North and Rivergate South Substations). The responses to the majority of these questions are applicable only to Parcel I and Parcel III (Rivergate North and South Substations). For questions that are applicable to all the parcels, individual answers are listed for each.</p>	<p>Question 4 Attachment Q04a_Rivergateplat1.pdf</p>
<p>a. Currently Owns</p>	<p>PGE currently owns the Rivergate Substations (Parcels I and III); see the attached documents (Q04a_Rivergateplat1.pdf and Q04a_Rivergateplat2.pdf). The Rivergate Substations are bounded by Time Oil Road to the west, N. Burgard Road to the south, the Bonneville Power Administration’s (BPA) St. Johns Substation to the east, and undeveloped land used for BPA transmission lines to the north.</p>	<p>Question 4 Attachments Q04a_Rivergateplat1.pdf Q04a_Rivergateplat2.pdf</p>
<p>b. Currently Leases</p>	<p>Not applicable. PGE does not lease the Rivergate Substations (Parcels I and III).</p>	
<p>c. Currently Operates</p>	<p>PGE currently operates the Rivergate Substations (Parcels I and III). See the documents (Q04a_Rivergateplat1.pdf and Q04a_Rivergateplat2.pdf) attached in response to Question 4a.</p>	<p>Question 4 Attachments Q04a_Rivergateplat1.pdf Q04a_Rivergateplat2.pdf</p>
<p>d. Currently otherwise affiliated with</p>	<p>Not applicable. There are no other properties currently affiliated with the Rivergate Substations (Parcels I and III).</p>	
<p>e. Historically Has Owned</p>	<p>PGE historically owned two other Rivergate parcels (Parcels II and IV); see the documents (Q04a_Rivergateplat1.pdf and Q04a_Rivergateplat2.pdf) attached in response to Question 4a. PGE purchased Parcel II on 4 October 1967 from Dulien Steel Products and Parcel IV on 9 July 1971 from Union Carbide Corporation. On 12 March 1985, Parcels II and IV were combined into a single surplus land tax lot; see the document (Q07_1985 PGE to PGE 1985.pdf) attached in response to Question 7. This tax lot (Parcels II and IV) was conveyed to Ray and Marion Blackford of the Oregon Pacific Steel and Metal Company on 19 March 1992. PGE reserved a</p>	<p>Question 04 Attachment Q04a_Rivergateplat1.pdf</p> <p>Also see Question 05 Attachment Q05c_Property Details.pdf</p> <p>Also see Question 07 Attachments</p>

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	<p>16' wide electric power easement through the property. See the documents (Q07_1985 PGE to PGE.pdf, Q07_1988 Pac Steel Contract.pdf, Q07_1991 Blackford Deed.pdf, and Q07_1991 Electric Power Easement.pdf) attached in response to Question 7.</p> <p>Other properties that PGE has historically owned within the Investigation Area are addressed in separate 104(e) responses.</p>	<p>Q07_1985 PGE to PGE.pdf Q07_1988 Pac Steel Contract.pdf Q07_1991 Blackford Deed.pdf Q07_1991 Electric Power Easement.pdf</p>
f. Historically Has Leased	To the best of PGE's knowledge, after reasonable inquiry, PGE did not historically lease the Rivergate Substations (Parcels I and III) or the historically owned parcels (Parcels II and IV) prior to purchase.	
g. Historically Has Operated	Not applicable. There are no known properties that PGE historically operated on but did not own in association with the Rivergate Substations (Parcels I and III).	
h. Historically otherwise affiliated with	Other than the historically owned parcels (Parcels II and IV) described in response to Question 4e, the Rivergate Substations (Parcels I and III) have not been affiliated with any other properties.	
5. Provide a brief summary of Respondent's relationship to each Property listed in response to Question 4 above, including the address, Multnomah County Alternative Tax lot Identification number(s), dates of acquisition, period of ownership, lease, operation, or affiliation, and a brief overview of Respondent's activities at the Properties identified.		
a. Relationship	Current owner (Parcels I and III) and historical owner (Parcels II and IV).	
b. Address	<p>The addresses for the Rivergate parcels are:</p> <p><u>Currently owned Rivergate Substations (Parcels I and III)</u> Parcel I – 8920 N Time Oil Rd, Portland, Oregon 97203</p> <p>Parcel III – 8849 N Burgard Way, Portland, Oregon 97203</p> <p><u>Historically owned Parcels II and IV</u> Parcels II/IV – 12299 N Burgard St, Portland, Oregon 97203</p>	
c. Multnomah County Alternative Tax ID #	<p>The Multnomah County alternative tax ID numbers for the Rivergate parcels are:</p> <p><u>Currently owned Rivergate Substations (Parcels I and III)</u> Parcel I - R971350480</p> <p>Parcel III – R971350520</p>	<p>Question 5 Attachments Q05c_Property Details.pdf Q05c_TaxMap.pdf</p> <p>Also see Question 4 Attachments Q04a_Rivergateplat1.pdf</p>

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.EPA Question	Response	Records/Information Available
	<p><u>Historically owned Parcels II and IV</u> Parcel II/IV – R971350750</p> <p>See the attached documents and the documents (Q04a_Rivergateplat1.pdf and Q04a_Rivergateplat2.pdf) attached in response to Question 4a.</p>	Q04a_Rivergateplat2.pdf
d. Date Acquired (leased)	<p>The date PGE acquired the Rivergate parcels was:</p> <p><u>Currently owned Rivergate Substations (Parcels I and III)</u> Parcel I – Purchased by PGE on 4 October 1967 from Dulien Steel Products. Parcel III – Purchased by PGE on 9 July 1971 from Union Carbide Corporation.</p> <p><u>Historically owned Parcels II and IV</u> Parcel II – Purchased by PGE on 4 October 1967 from Dulien Steel Products. Parcel IV – Purchased by PGE on 9 July 1971 from Union Carbide Corporation.</p> <p>See the documents attached in response to Question 4a and the documents attached in response to Question 7.</p>	<p>See Question 4 Attachment Q04a_Rivergateplat1.pdf Q04a_Rivergateplat2.pdf</p> <p>Also see all Question 7 Attachments</p>
e. Period of Lease	Not applicable. PGE is the current owner of the Rivergate Substations (Parcels I and III) and the historical owner of adjacent Parcels II and IV.	
f. Period of Ownership, Lease or Operation	<p>The period of PGE ownership for the Rivergate parcels is:</p> <p><u>Currently owned Rivergate Substations (Parcels I and III)</u> Parcel I – 1967 to present. Parcel III – 1971 to present.</p> <p><u>Historically owned Parcels II and IV</u> Parcel II – 1967 to 1992. Parcel IV – 1971 to 1992.</p>	

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g. Activities	<p>The following describes the PGE activities at the Rivergate parcels:</p> <p><u>Rivergate Substations (Parcels I and III) –</u> In 1967, Parcel I was purchased by PGE from Dulien Steel Products. In 1971, Parcel III was purchased by PGE from Union Carbide Corporation. The Rivergate Substations were constructed on Parcels I and III. Since then, the substations have undergone equipment upgrades and modifications, as needed. PGE has used the Rivergate Substations exclusively for substation operations since 1967.</p> <p>The Rivergate Substations Purpose:</p> <ul style="list-style-type: none"> • Provide continuous electrical power to customers; and • Protect public and equipment from electrical and mechanical faults. <p>The Rivergate Substations Function: As a distribution substation – engineered and crafted collection of high voltage equipment, which transforms higher sub-transmission voltage (57kv) to lower distribution voltage (11kv and 4kv). High voltage switches and circuit breakers allow the circuits to be safely opened for routine maintenance or to interrupt electrical faults. Automatic operation is achieved through control, protection, telemetry, and communication systems located within the substation. As such, on-site activities are limited to maintenance, repair, and replacement of substation components as they are needed.</p> <p>Parcel II - In 1967, PGE purchased the parcel from Dulien Steel Products. To the best of PGE's knowledge, after reasonable inquiry, PGE never developed or operated on this parcel; however, this land was leased to other persons, see the response to Question 6c. PGE sold the property in 1992.</p> <p>Parcel IV – In 1971, PGE purchased the parcel from Union Carbide Corporation. To the best of PGE's knowledge, after reasonable inquiry, PGE never developed or operated on this parcel; however, this land was leased to other persons, see the response to Question 6c. PGE sold the property in 1992.</p>	
6. Identify any persons who concurrently with you exercises or exercised actual control or who held significant authority to control activities at each Property, including:		
a. partners or joint ventures;	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, no known partners or joint ventures have/had exercised actual control or held significant authority to control activities at the Rivergate Substations (Parcels I and III), or the historically owned parcels (Parcels II and IV).	

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<p>b. any contractor, subcontractor, or licensor that exercised control over any materials handling, storage, or disposal activity on the Property; (service contractors, remediation contractors, management and operator contractors, licensor providing technical support to licensed activities);</p>	<p>The Rivergate Substations (Parcels I and III) –To the best of PGE’s knowledge, after reasonable inquiry, no consultants or subcontractors have exercised control over any materials handling, storage, or disposal activities at the Rivergate Substations.</p> <p>Parcels II and IV - To the best of PGE’s knowledge, after reasonable inquiry, during PGE ownership, the only consultants or subcontractors that have exercised control over any materials handling, storage, or disposal activity at these parcels were the non-PGE subcontracted persons involved in the removal of the unauthorized hazardous waste that was stored on the property by Mike Livingston. See the response to Questions 6c.</p>	
<p>c. any person subleasing land, equipment or space on the Property;</p>	<p><u>Parcels II and IV – Mr. Mike Edwardson</u></p> <p>In March 1976, PGE granted a land use permit to Mike Edwardson for the use of Parcels II and IV for grazing horses; see the land use permit (Q07_ 1976 Edwardson Land Use Permit.pdf) attached in response to Question 7. Mike Edwardson is listed as the president of Portland Industrial Chemical Company.</p> <p>On 2 February 1982, a DEQ inspector observed approximately 350 55-gallon drums and other containers labeled as containing hazardous materials stored on the parcels. Subsequent tests of the drum contents determined that the pH of sludge in some drums (pH < 2.0) classified the sludge as corrosive hazardous waste. On 19 February 1982, DEQ issued a notice of violation to Mike Edwardson See the attached documents (Q06c_1982 Notice of Violation.pdf, Q06c_1982 Edwardson_DEQ HazWaste Letter.pdf, and Q06c_1982 Edwardson Debris Removal Letter.pdf).</p> <p>The land use permit was terminated by PGE in June 1982 due to the above mentioned discovery, which was contrary to the permission granted in the land use permit; see the document (Q07_1982 Edwardson Land Use Termination Request.pdf) attached in the response to Question 7. To the best of PGE’s knowledge, after reasonable inquiry, the drums were removed by Mike Edwardson in July 1982 in compliance with DEQ standards.</p> <p><u>Parcels II and IV – Oregon Pacific Steel and Company</u></p> <p>From 15 February 1985 through 10 February 1988, PGE leased Parcels II and IV to Ray and Marion Blackford of the Oregon Pacific Steel and Metal Company. On 10 February 1988, these parcels were sold on contract to Ray and Marion Blackford of the Oregon Pacific Steel and Metal Company. The bargain and sale deed was recorded on 19 March 1992. PGE reserved a 16’ wide electric power easement through the property. See the documents attached in response to Question 4a and the documents (Q07_1985 Pac Steel Lease.pdf, Q07_1988 Pac Steel Contract.pdf, Q07_1991 Blackford Deed.pdf, and Q07_1991 Electric Power Easement.pdf) attached in response to Question 7.</p>	<p>Question 6 Attachments Q06c_1982 Edwardson_DEQ HazWaste Letter.pdf Q06c_1982 Notice of Violation.pdf Q06c_1982 Edwardson Debris Removal Letter.pdf</p> <p>Also see Question 4 Attachments Q04a_Rivergateplat1.pdf Q04a_Rivergateplat2.pdf</p> <p>Also see Question 07 Attachments Q07_1976 Edwardson Land Use Permit.pdf Q07_1982 Edwardson Land Use Termination Request.pdf Q07_1985 Pac Steel Lease.pdf Q07_1991 Blackford Deed.pdf Q07_1988 Pac Steel Contract.pdf Q07_1991 Electric Power Easement.pdf</p> <p>Also see all Question 11 Attachments</p>
<p>d. utilities, pipelines, railroads and any other person with activities and/or easements regarding the Property;</p>	<p>As shown in brown and peach on the plat (Q04a_Rivergateplat1.pdf) attached in response to Question 4a and shown in the deed (Q07_1967 Dullen Deed.pdf) attached in response to Question 7, a 50 ft wide road easement for Time Oil Road is located along the entire length of the west edge of Parcels I and II. PGE was granted an easement to the western 25 ft of the road (shown in brown on the plat) from Schnitzer Investment Group. PGE granted easement</p>	<p>Question 4 Attachment Q04a_Rivergateplat1.pdf</p> <p>Also see Question 7 Attachments</p>

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	<p>rights for the eastern 25 ft. of the road (shown in peach on the plat) to the following companies:</p> <ul style="list-style-type: none"> • Time Oil Company • Schnitzer Investment Group • Port of Portland • Oregon Steel Mills • Oregon Pacific Steel and Metal Company <p>See the road easement and maintenance documents (Q07_1993 Rd Mtce Agrmt.pdf, Q07_1994 Road Maintenance Amnd.pdf, Q07_2004 Road Maintenance Agreement.pdf, Q07_2004 Time Oil Road Esmt.pdf, Q07_2004 Time Oil Road Existing Easements Figure.pdf and Q07_2004 Time Oil Road Esmt.pdf) attached in response to Question 7.</p> <p>As shown in the plat (Q04a_Rivergateplat1.pdf) attached in response to Question 4a, PGE granted a 10-foot fiber optic cable easement to Williams Communications, Inc. in 2000. The easement runs through the western edge of Parcel I. A temporary construction license was also issued to Williams Communications, Inc. for the completion of the fiber optic cable installation. See the documents (Q07_2000 Williams Utility Easement.pdf and Q_07_RivergateN_FIO_TempConst.pdf) attached in response to Question 7.</p>	<p>Q07_1967 Dulien Deed.pdf Q07_1993 Rd Mtce Agrmt.pdf Q07_1994 Road Maintenance Amnd.pdf Q07_2004 Road Maintenance Agreement.pdf Q07_2004 Time Oil Road Esmt.pdf Q07_2004 Time Oil Road Existing Easements Figure.pdf Q07_2004 Time Oil Road Esmt.pdf Q07_2000 Williams Utility Easement.pdf Q07_RivergateN_FIO_TempConst.pdf</p>
e. major financiers and lenders;	Not applicable. None have been identified.	
f. any person who exercised actual control over any activities or operations on the Property;	<p>To the best of PGE's knowledge, after reasonable inquiry, only PGE personnel (see responses to Questions 6g and 6h) have exercised actual control over activities or operations at the Rivergate Substations (Parcels I and III).</p> <p>To the best of PGE's knowledge, after reasonable inquiry, only PGE personnel (see responses to Questions 6g and 6h), lessees and/or their contactors (see the responses to Question 6c and 11) exercised actual control over activities or operations at Parcels II and IV during PGE's ownership.</p>	
g. any person who held significant authority to control any activities or operations on the Property;	<p>Multiple individuals have had authority within PGE to access and conduct activities at the Rivergate Substations (Parcels I and III) and Parcels II and IV during PGE ownership. Many are listed in the following documents:</p> <ul style="list-style-type: none"> • Bullseye articles: 1971, 1973 and 1980. • Organizational charts for the years: 1980, 1982, 1984, 1986, 1988, 1989, 1990, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, and 2005. • Distribution and System Planning information. • Management structure information 1982-2007. <p>In addition, the lessees described in responses to Question 6c and 11 had the authority to access and conduct activities at Parcels II and IV during PGE's ownership.</p>	<p>Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Organizational Charts.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIC Structure Info 1982-2007.pdf</p>
h. any person who had a significant presence or who conducted significant activities at the Property; and	Multiple individuals have had authority within PGE to access and conduct activities at the Rivergate Substations (Parcels I and III) and Parcels II and IV during PGE ownership. Many are listed on the documents attached in response to Question 6g:	<p>Question 6 Attachment Q06h_Rivergate1989 Int HS Sur.pdf</p>

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	<ul style="list-style-type: none"> • Bullseye articles: 1971, 1973 and 1980. • Organizational charts for the years: 1980, 1982, 1984, 1986, 1988, 1989, 1990, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, and 2005. • Distribution and System Planning information. • Management structure information 1982-2007. <p>See the documents attached in response to Question 6g.</p> <p>In addition, the lessees described in responses to Question 6c and 11 had the authority to access and conduct activities at Parcels II and IV during PGE's ownership.</p> <p>Although the identity of the individual(s) is unknown, someone engaged in illegal dumping of waste at the property boundary between Parcel IV and the BPA property to the east. To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the unauthorized dumping of waste by unknown individuals at the property boundary between Parcel IV and BPA's property:</p> <p>In 1989, PGE was conducting a property line survey when the unauthorized disposal of an unidentified waste was discovered at the property boundary between Parcel IV and BPA; see the attached document (Q06h_Rivergate1989 Int HS Sur.pdf). PGE and BPA jointly conducted a survey of the unauthorized disposal area and found 12 to 15 unlabeled plastic containers containing clear or yellowing liquid, as well as other medical type wastes, on either side of the east fence between PGE and BPA properties, as well as in an unoccupied one room building about 20 yards to the southeast of the fence on BPA property. To the best of PGE's knowledge, after reasonable inquiry and based on the attached document (Q06h_Rivergate1989 Int HS Sur.pdf), BPA removed the hazardous waste.</p>	
i. government entities that had proprietary (as opposed to regulatory) interest or involvement with regard to the activity on the Property.	To the best of PGE's knowledge, after reasonable inquiry, no government entities have (or had) a proprietary interest or involvement at the Rivergate Substations (Parcels I and III) or the historically owned parcels (Parcels II and IV) during PGE's ownership.	
Section 2.0 - Owner/Operator Information (continued)		
7. Identify and describe any legal or equitable interest that you now have, or previously had in each Property. Include information regarding the nature of such interest: when, how, and from whom such interest was obtained; and when, how, and to whom such interest was conveyed, if applicable. In addition,	<p>The document (Q04a_Rivergateplat1.pdf) attached in response to Question 4a indicates when and from whom the Rivergate parcels (Parcels I, II, III, and IV) were purchased by PGE. The following is a summary of the deeds, leases, purchase agreements, and easements at the Rivergate parcels:</p> <p><u>Rivergate Substations (Parcels I and III)</u></p> <ul style="list-style-type: none"> • Parcel I - Purchased on 4 October 1967 from Dulien Steel Products; see the attached deed (Q07_1967 Dulien Deed.pdf). 	<p>Question 7 Attachments</p> <p>Q07_1967 Dulien Deed.pdf</p> <p>Q07_1971 Union Carbide Deed.pdf</p> <p>Q07_1976 Edwardson Land Use Permit.pdf</p> <p>Q07_1982 Edwardson Land Use Termination Request.pdf</p> <p>Q07_1985 Pac Steel Lease.pdf</p> <p>Q07_1985 PGE to PGE.pdf</p> <p>Q07_1988 Pac Steel Contract.pdf</p> <p>Q07_1991 Blackford Deed.pdf</p>

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<p>submit copies of all instruments evidencing the acquisition or conveyance of such interest (e.g., deeds, leases, purchase and sale agreements, partnership agreements, etc.). Also provide all information and documentation regarding, but not limited to the following:</p>	<ul style="list-style-type: none"> Parcel III - Purchased on 9 July 1971 from Union Carbide Corporation; see the attached deed (Q07_1971 Union Carbide Deed.pdf). PGE granted a 10-foot fiber optic cable easement to Williams Communications, Inc. in 2000. The easement runs through the western edge of Parcel I. A temporary construction license was also issued to Williams Communications, Inc. for the completion of the fiber optic cable installation. See the attached documents (Q07_2000 Williams Utility Easement.pdf and Q_07_RivergateN_FIO_TempConst.pdf). <p><u>Parcels II and IV</u></p> <ul style="list-style-type: none"> Parcel II was purchased with Parcel I on 4 October 1967 from Dulien Steel Products; see the attached deed (Q07_1967 Dulien Deed.pdf). To the best of PGE's knowledge, after reasonable inquiry, PGE never developed the parcel. Parcel IV was purchased with Parcel III on 9 July 1971 from Union Carbide Corporation; see the attached deed (Q07_1971 Union Carbide Deed.pdf). To the best of PGE's knowledge, after reasonable inquiry, PGE never developed the parcel. In March 1976, PGE granted a land use permit to Mike Edwardson for the use of Parcels II and IV for grazing horses; see the attached document (Q07_1976 Edwardson Land Use Permit.pdf). The land use permit was terminated in June 1982 after it was discovered that the lessee was using the property to store chemical waste materials, metal barrels, and various scrap materials contrary to the permission granted in the land use permit; see the attached document (Q07_1982 Edwardson Land Use Termination Request.pdf). From 15 February 1985 through 10 February 1988, PGE leased Parcels II and IV to Ray and Marion Blackford of the Oregon Pacific Steel and Metal Company. On 10 February 1988, these parcels were sold on contract to Ray and Marion Blackford of the Oregon Pacific Steel and Metal Company. The bargain and sale deed was recorded on 19 March 1992. PGE reserved a 16' wide electric power easement through the property. See the documents attached in response to Question 4a and the attached documents (Q07_1985 Pac Steel Lease.pdf, Q07_1988 Pac Steel Contract.pdf, Q07_1991 Blackford Deed.pdf, and Q07_1991 Electric Power Easement.pdf). <p><u>Road Easements (Parcels I and II)</u></p> <ul style="list-style-type: none"> As shown in brown and peach on the plat (Q04a_Rivergateplat1.pdf) attached in response to Question 4a and shown in the attached deed (Q07_1967 Dulien Deed.pdf), a 50 ft wide road easement for Time Oil Road is located along the entire length of the west edge of Parcels I and II. PGE was granted an easement to the western 25' of the road (shown in brown on the plat) from Schnitzer Investment Group. PGE granted easement rights for the eastern 25' of the road (shown in peach on the plat) to the 	<p>Q07_1991 Electric Power Easement.pdf Q07_1993 Rd Mtce Agrmt.pdf Q07_1994 Road Maintenance Amnd.pdf Q07_2000 Williams Utility Easement.pdf Q07_2004 Road Maintenance Agreement.pdf Q07_2004 Time Oil Road Esmt.pdf Q07_2004 Time Oil Road Existing Easements Figure.pdf Q07_RivergateN_FIO_TempConst.pdf</p> <p>Also see Question 4 Attachment Q04a_Rivergateplat1.pdf</p> <p>Also see all Question 11 Attachments</p>

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	<p>following companies:</p> <ul style="list-style-type: none"> ▪ Time Oil Company ▪ Schnitzer Investment Group ▪ Port of Portland ▪ Oregon Steel Mills ▪ Oregon Pacific Steel and Metal Company <p>See the attached documents (Q07_1993 Rd Mtce Agrmt.pdf, Q07_1994 Road Maintenance Amnd.pdf, Q07_2004 Road Maintenance Agreement.pdf, Q07_2004 Time Oil Road Esmt.pdf, Q07_2004 Time Oil Road Existing Easements Figure.pdf and Q07_2004 Time Oil Road Esmt.pdf).</p> <p>Also see the responses to Questions 4 through 6, above.</p>	
<p>a. any deeds and/or transfer information between Respondent and Dulien Steel Products;</p>	<p>Parcels I and II were purchased on 4 October 1967 from Dulien Steel Products; see the attached deed (Q07_1967 Dulien Deed.pdf) and CERCLA information request (Q07a_Dulien CERCLA Information Request.pdf) for a history of transactions between PGE and Dulien Steel Products in regards to the Rivergate parcels (Parcels I and II). To the best of PGE's knowledge, after reasonable inquiry, no other information was found regarding transactions between PGE and Dulien Steel Products at the Rivergate parcels (Parcels I and II).</p>	<p>Question 7 Attachments Q07a_Dulien CERCLA Information Request.pdf Q07_1967 Dulien Deed.pdf</p>
<p>b. deed and title information for Parcels R971340160, R971340180, R971350100, R971350480, R941191230, R971340130 and R971340200;</p>	<p>The Multnomah County alternative tax ID number for Parcel I is R971350480. The majority of the Rivergate North Substation and the northern portion of the Rivergate South Substation are located within this parcel. See the attached deed and title information (Q07_1967 Dulien Deed.pdf and Q07b_Deed and Title Information.pdf) and the tax map (Q05_Tax Map.pdf) attached in response to Question 5.</p> <p>The remainder of these parcels are not associated with the Rivergate Substations (Parcels I and III) or the historically owned parcels (Parcels II and IV).</p>	<p>Question 7 Attachments Q07b_Deed and Title Information.pdf Q07_1967 Dulien Deed.pdf</p> <p>Also see Question 5 Attachment Q05c_TaxMap.pdf</p>
<p>c. a complete copy of the Memorandum of Contract Book 1292 p.616 for parcel R941191230, dated September 5, 1978;</p>	<p>Not applicable to the Rivergate Substations (Parcels I and III) or the historically owned parcels (Parcels II and IV).</p>	
<p>8. If you are the current owner and/or current operator, did you acquire or operate the Property or any portion of the Property after the disposal or placement of hazardous substances, waste, or materials on, or at the Property? Describe all of the facts on which you base the answer to this question.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, PGE did not know of, and had no reason to know of, any disposal or placement of hazardous substances, waste, or materials on or at any part of the Rivergate parcels (Parcels I, II, III, and IV) that may have occurred prior to their acquisition by PGE. To the best of PGE's knowledge, after reasonable inquiry, no site investigations were performed on the Rivergate parcels prior to taking ownership.</p>	

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.EPA Question	Response	Records/Information Available
<p>9. At the time you acquired or operated the Property, did you know or have reason to know that any hazardous substance, waste, or material was disposed of on, or at the Property? Describe all investigations of the Property you undertook prior to acquiring the Property and all of the facts on which you base the answer to this question.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, PGE did not know of, and had no reason to know of, any disposal or placement of hazardous substances, waste, or materials on or at any part of the Rivergate parcels (Parcels I, II, III, and IV) that may have occurred prior to their acquisition by PGE. To the best of PGE's knowledge, after reasonable inquiry, no site investigations were performed on the Rivergate parcels prior to taking ownership.</p>	
<p>10. Identify all prior owners that you are aware of for each Property identified in Response to Question 4 above. For each prior owner, further identify if known:</p> <p>a. The dates of ownership</p> <p>b. All evidence showing that they controlled access to the Property</p> <p>c. All evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at the Property during the period that they owned the Property.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the information PGE has regarding all prior owners for the Rivergate parcels (Parcels I, II, III, and IV).</p> <p><u>Parcels I and II</u></p> <p>PGE purchased Parcel I and Parcel II on 4 October 1967 from Dulien Steel Products. Dulien Steel Products is listed as a wholesale recycling facility of scrap metal. See the document (Q04a_Rivergateplat1.pdf) attached in response to Question 4a and the document (Q07_1967 Dulien Deed.pdf) attached in response to Question 7. Based on the deed located on pages 3 - 8 of the document (Q07a_Dulien CERCLA Information Request.pdf) attached in response to Question 7a, Dulien Steel bought the property from Elizabeth Shenker on 3 October 1967.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, PGE never developed Parcel II. PGE sold Parcel II on 19 March 1992 to Ray and Marion Blackford of the Oregon Pacific Steel and Metal Company; see the documents (Q07_1988 Pac Steel Contract.pdf and Q07_1991 Blackford Deed.pdf) attached in response to Question 7. PGE is the current owner of Parcel I. To the best of PGE's knowledge, after reasonable inquiry, PGE has no information regarding Dulien Steel Products or Elizabeth Shenker's activities on Parcels I or II.</p> <p><u>Parcels III and IV</u></p> <p>PGE purchased Parcel III and Parcel IV on 9 July 1971 from Union Carbide Corporation. Union Carbide Corporation is listed as a chemical and polymer manufacturer. See the document (Q04a_Rivergateplat1.pdf) attached in response to Question 4a and the document (Q07_1971 Union Carbide Deed.pdf) attached in response to Question 7. Based on the attached document (Q10_Rivergate 1947 Drawing.pdf), it appears that Parcel III was owned by Marshal Brothers in 1947.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, PGE never developed Parcel IV.</p>	<p>Question 10 Attachments Q10_Rivergate Sanborn Maps.pdf Q10_Rivergate 1947 Drawing.pdf</p> <p>Also see Question 4 Attachment Q04a_Rivergateplat1.pdf</p> <p>Also see Question 7 Attachments Q07_1967 Dulien Deed.pdf Q07_1988 Pac Steel Contract.pdf Q07_1991 Blackford Deed.pdf Q07_1971 Union Carbide Deed.pdf Q07a_Dulien CERCLA Information Request.pdf</p>

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.EPA Question	Response	Records/Information Available
	<p>PGE sold the undeveloped property on 19 March 1992 to Ray and Marion Blackford of the Oregon Pacific Steel and Metal Company; see the documents (Q07_1988 Pac Steel Contract.pdf and Q07_1991 Blackford Deed.pdf) attached in response to Question 7. PGE is the current owner of Parcel III. To the best of PGE's knowledge, after reasonable inquiry, PGE has no information regarding Union Carbide Corporation's activities on Parcels III or IV.</p> <p>PGE searched the Sanborn library collection for fire insurance maps of the Rivergate Substations (Parcels I and III). No insurance maps were found for these parcels. See the attached Sanborn Map (Q10_Rivergate Sanborn Maps.pdf), which documents this search.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, no site investigations were performed on the Rivergate parcels (Parcels I, II, III, and IV) prior to taking ownership. To the best of PGE's knowledge, after reasonable inquiry, PGE has no knowledge of a hazardous substance, pollutant, or contaminant that was released or threatened to be released on the Rivergate parcels prior to PGE's purchase.</p>	
<p>11. Identify all prior operators of the Property, including lessors, you are aware of for each Property identified in response to Question 4 above. For each such operator, further identify if known:</p> <p>a. the dates of operation;</p> <p>b. the nature of prior operations at the Property;</p> <p>c. all evidence that they controlled access to the Property; and</p> <p>d. all evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at or from the Property during the period that they were operating the Property</p>	<p>See the responses to Questions 4 through 7 and Question 10. In addition, see the document (Q04a_Rivergateplat1.pdf) attached in response to Question 4, the documents attached in response to Question 6c, and the documents attached in response to Question 7.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, PGE does not have information on prior operations on the Rivergate parcels (Parcels I, II, III, and IV) other than the information contained in the responses to Questions 5g, 6c, 7, and 10, above.</p>	<p>See Question 4 Attachment Q04a_Rivergateplat1.pdf</p> <p>Also see Question 6 Attachments Q06c_1982 Edwardson_DEQ HazWaste Letter.pdf Q06c_1982 Notice of Violation.pdf Q06c_1982 Edwardson Debris Removal Letter.pdf</p> <p>Also see all Question 7 Attachments</p>
<p>12. If not included in response to any of the previous questions, please describe the purpose and duration of each aquatic lands lease Respondent or the operator of Respondent's Property(ies) ever obtained from the State of Oregon and</p>	<p>Not applicable. There is no aquatic lands lease associated with the Rivergate Substations (Parcels I and III) or the historically owned parcels (Parcels II and IV).</p>	

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.EPA Question	Response	Records/Information Available
provide a copy of each application for and aquatic lands lease obtained.		
Section 3.0 - Description of Each Property		
13. Provide the following information about each Property identified in response to Question 4:	The responses to the questions in Sections 3.0, 4.0, 5.0, and 6.0 only pertain to the Rivergate Substations (Parcel I and Parcel III) on which PGE developed and had/has substation operations. The adjacent, historically owned parcels (Parcels II and IV) were, to the best of PGE's knowledge, after reasonable inquiry, never developed or operated on prior to selling the parcels.	
a. property boundaries, including a written legal description;	<p>The majority of the Rivergate North Substation and the northern portion of the Rivergate South Substation are located on Parcel I, an 11.03-acre parcel located in Section 35, Township 2 North, Range 1 West of the Willamette Meridian.</p> <p>The majority of Rivergate South Substation and a southeastern portion of the Rivergate North Substation are located on Parcel III, a 3.04-acre parcel located in Section 35, Township 2 North, Range 1 West of the Willamette Meridian.</p> <p>The Rivergate Substations are bounded by Time Oil Road to the west, N. Burgard Road to the south, BPA's St. John's Substation to the east, and undeveloped land used for BPA transmission lines to the north.</p> <p>Also see the responses and documents attached for Questions 4, 5, and 7.</p>	<p>See all Question 4 Attachments</p> <p>Also see all Question 5 Attachments</p> <p>Also see all Question 7 Attachments</p>
b. location of underground utilities (telephone, electrical, sewer, water main, etc.);	<p>To the best of PGE's knowledge, after reasonable inquiry and based on the attached electrical diagrams (Q13b_Rivergate North_Fieldview.pdf and Q13b_North Operating System.pdf), there are no underground power distribution conduits at the Rivergate North Substation. Power is distributed via overhead conductors mounted on poles. In 2000, an underground fiber optics cable was installed on the west edge of Parcel I; see the document (Q07_2000 Williams Utility Easement.pdf) attached in response to Question 7.</p> <p>At the Rivergate South Substation there are 3 pairs of 6-inch PVC conduits that contain 3-750 AL XLP/DB jacketed cable in each conduit for a total of six 6-inch conduits and 18 cables. The conduits are buried at approximately 3-feet deep and run from feeder circuit breakers inside of the substation to poles outside the substation. These cables and conduits are used as 11kV feeder getaways to distribute power within the nearby community. The attached diagrams (Q13b_Rivergate South_Fieldview.pdf and Q13b_South Operating System.pdf) show the approximate location and orientation of these three underground feeder getaways labeled Rivergate-Pearcy, Rivergate-Swift, and Rivergate-11011.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, and based on the attached Sewer</p>	<p>Question 13 Attachments</p> <p>Q13b_Rivergate North_Fieldview.pdf (CEII¹)</p> <p>Q13b_North Operating System.pdf (CEII¹)</p> <p>Q13b_Rivergate North_Sewer.pdf</p> <p>Q13b_Rivergate South_Fieldview.pdf (CEII¹)</p> <p>Q13b_South Operating System.pdf (CEII¹)</p> <p>Q13b_Rivergate South_Sewer.pdf</p> <p>Also see Question 7 Attachment</p> <p>Q07_2000 Williams Utility Easement.pdf</p>

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

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.EPA Question	Response	Records/Information Available
	maps (Q13b_Rivergate North_Sewer.pdf and Q13b_Rivergate South_Sewer.pdf), the Rivergate Substations are not directly serviced by stormwater, sanitary, or combined sewer lines. To the best of PGE's knowledge, after reasonable inquiry, there is no municipal water service to the Rivergate Substations.	
c. location of all underground pipelines whether or not owned, controlled or operated by you;	To the best of PGE's knowledge, after reasonable inquiry, other than the pipelines associated with the stormwater control and secondary oil spill containment system discussed in Questions 13i, 18, and 19, there are no underground pipelines at the Rivergate Substations.	
d. surface structures (e.g., buildings, tanks, pipelines, etc.);	<p>In addition to the poles described in response to Question 13b, the following is a description of the other structures located on the Rivergate Substations.</p> <p><u>Rivergate North Substation</u> <i>Buildings:</i></p> <ul style="list-style-type: none"> Control building – protective relays, telemetry, communications and control equipment. <p><i>Structures:</i></p> <ul style="list-style-type: none"> Transmission structure – supports high voltage conductors and switches. Capacitor structure – supports high voltage capacitor banks. <p><i>Equipment:</i></p> <ul style="list-style-type: none"> Power circuit breakers – 11 Metering transformers – 21 Station Service Transformers - 2 Bulk Transformers – 5 <p><u>Rivergate South Substation</u> <i>Buildings:</i></p> <ul style="list-style-type: none"> Control building – protective relays, telemetry, communications and control equipment. <p><i>Structures:</i></p> <ul style="list-style-type: none"> Transmission structure – supports high voltage conductors and switches. Distribution structure – supports medium voltage conductors and switches. <p><i>Equipment:</i></p> <ul style="list-style-type: none"> Power circuit breakers – 4 Metering transformers – 2 Station Service Transformers - 1 Power Transformers – 2 <p>See the attached diagrams.</p>	<p>Question 13 Attachments Q13d_Rivergate North_Fence.pdf (CEII¹) Q13d_Rivergate South_Fence.pdf (CEII¹)</p>
e. over-water structures (e.g., piers, docks, cranes, etc.);	There are/were no over-water structures at the Rivergate Substations. The Rivergate Substations are not adjacent to the Willamette River.	
f. dry wells;	To the best of PGE's knowledge, after reasonable inquiry, PGE had/has no dry wells at the	

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

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.EPA Question	Response	Records/Information Available
<p>g. treatment or control devices (e.g., surface water, air, groundwater, Resource Conservation and Recovery Act (RCRA), Transfer, Storage, or Disposal (TSD), etc.);</p>	<p>Rivergate Substations.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, the following summarizes the treatment and control devices at the Rivergate Substations:</p> <p><u>Rivergate North Substation</u></p> <p>The attached hand-drawn sketch (Q13g_Rivergate North_Drain Line.pdf) indicates that a 1¼” drain line from a sump pump in the basement of the Rivergate North Substation control house conveys any groundwater that may accumulate in the basement’s sump out to the west to a 32” X 28” sump just off Time Oil Road. Flow from the sump would be to adjacent wetlands on the north side of the switchyard. To the best of PGE’s knowledge, after reasonable inquiry, it is not known when the drain line and sump pump were installed at the Rivergate North Substation control house.</p> <p>See Questions 13i, 18, and 19 for the stormwater control and secondary oil spill containment system.</p> <p><u>Rivergate South Substation</u></p> <p>To the best of PGE’s knowledge, after reasonable inquiry, there are no treatment or control devices at the Rivergate South Substation.</p>	<p>Question 13 Attachments Q13g_Rivergate North_Drain Line.pdf</p>
<p>h. groundwater wells, including drilling logs;</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, PGE had/has no groundwater wells at the Rivergate Substations.</p>	
<p>i. stormwater drainage system, and sanitary sewer system, past and present, including septic tank(s) and where, when and how such systems are emptied and maintained;</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, and based on the attached Sewer maps (Q13b_Rivergate North_Sewer.pdf and Q13b_Rivergate South_Sewer.pdf), the Rivergate Substations are not directly serviced by stormwater, sanitary, or combined sewer lines. To the best of PGE’s knowledge, after reasonable inquiry, there is no municipal water service to the Rivergate Substations.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, the following summarizes the stormwater drainage at the Rivergate Substation.</p> <p><u>Rivergate North</u></p> <p>To the best of PGE’s knowledge, after reasonable inquiry, PGE was unable to locate any records describing the sites’ stormwater drainage prior to 1992/1993; however, it is reasonable to assume that stormwater infiltrated through the gravel surface at the Rivergate North Substation. A stormwater control and secondary oil spill containment system was installed at the Rivergate North Substation in 1992/1993. The primary purpose of the secondary spill containment system is to contain oil from power equipment in case of leaks or failures (see the response to Question 19 for further information). The features of the stormwater control and secondary spill containment system included:</p>	<p>Question 13 Attachments Q13b_Rivergate North_Sewer.pdf Q13b_Rivergate South_Sewer.pdf</p> <p>Also see Question 19 Attachments Q19_OilSpillContainment Location.pdf (CEII¹) Q19_OilSpillContainment.pdf Q19_OilSpillExcavation.pdf Q19_OilWaterSeparator Location.pdf (CEII¹) Q19_OilWaterSeparator.pdf Q19_Rivergate North_SPCC Plan.pdf Q19_Rivergate South_SPCC Plan.pdf</p>

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

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	<ul style="list-style-type: none"> • Installation of a wood barrier and/or wood barriers with sand filters around the perimeter of the substation (within the fence line); • Construction of compacted gravel berms at entrances to both gates; • Addition of an impermeable liner under the transformers; • Addition of a clay mat over the impermeable liner and under the transformers; • Addition of an oil water separator within an oil spill containment tank north of the secondary containment area (i.e., lined transformer area); • Addition of non-perforated PVC pipe within the secondary containment area, which drains stormwater and/or spilled oil from within the lined transformer area to the adjacent oil water separator; and • Installation of an unlined drainage trench north of the oil water separator (outside of the secondary containment area) with perforated pipe, which receives stormwater from the oil water separator. <p>To the best of PGE’s knowledge, after reasonable inquiry, stormwater falling within the stormwater control and secondary containment system (lined areas) flows through the non-perforated PVC pipes, to the oil/water separator, and then to the unlined drainage trench where it infiltrates through the gravel surface. Stormwater falling outside the stormwater control and secondary oil containment system infiltrates through the gravel surface covering those portions of the site. See the documents (Q19_OilSpillContainment Location.pdf, Q19_OilSpillExcavation.pdf, Q19_OilWaterSeparator Location.pdf, and Q19_OilWaterSeparator.pdf) attached in response to Question 19 and the figure on page 11 of the Rivergate North Substation SPCC Plan (Q19_Rivergate North_SPCC Plan.pdf), also attached in response to Q19.</p> <p><u>Rivergate South Substation</u> As noted in the Rivergate South Substation SPCC plan (Q19_Rivergate South_SPCC Plan.pdf) attached in response to Question 19, there is no stormwater control or secondary oil spill containment system at the Rivergate South Substation. To the best of PGE’s knowledge, after reasonable inquiry, stormwater falling at the Rivergate South Substation infiltrates through the gravel surface.</p>	
<p>j. subsurface disposal field(s), Underground Injection Control (UIC) wells, and other underground structures (e.g., underground storage tanks (USTs); and where they are located, if they are still used, and how they were closed.</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, other than the stormwater control and secondary oil spill containment system described in response to Questions 13i and 19, there are no known subsurface disposal fields, Underground Injection Control (UIC) wells, or other underground structures at the Rivergate Substations.</p>	
<p>k. any and all major additions, demolitions or changes on, under or</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, the major modifications to the Rivergate North Substation include:</p>	<p>Question 13 Attachments Q13k_1990 Install Fault Recorder.pdf (CEII¹)</p>

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

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.EPA Question	Response	Records/Information Available
about the Property, its physical structures or to the Property itself (e.g., stormwater drainage, excavation work); and any planned additions, demolitions or other changes to the Property;	<ul style="list-style-type: none"> • Initial substation construction and installation of electrical equipment in 1968; • Installation of a digital recorder, interface rack and assorted auxiliary relays in the control center; • Installation of a 115kV series reactor; and • Installation of the stormwater control and secondary spill containment system, including an oil water separator, in 1992/1993. <p>See the response to Question 13d for a description of the substation structures. Also see the attached documents (Q13k_1990 Install Fault Recorder.pdf, Q13k_1990 Install Fault Recorder.pdf, and Q13k_Rivergate North_Grading.pdf) and the documents (Q19_OilSpillContainment.pdf, Q19_OilWaterSeparator.pdf, Q19_OilSpillExcavation.pdf, Q19_OilSpillContainment Location.pdf, and Q19_OilWaterSeparator Location.pdf) attached in response to Question 19. Also, see the attached document (Q13k_North_List of Materials.pdf), which lists the materials for electrical arrangement added and removed since 1968.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, there have been no major modifications to the Rivergate South Substation since the initial substation construction and installation of electrical equipment in 1972. See the attached document (Q13k_South_List of Materials.pdf) which lists the materials for electrical arrangement added and removed since 1972, as well as the document (Q13k_1972 Rivergate South Grading.pdf) attached in response to Question 13l.</p>	<p>Q13k_2006 Install Reactor.pdf (CEII¹) Q13k_North_List of Materials.pdf Q13k_South_List of Materials.pdf Q13k_Rivergate North_Grading.pdf Q13k_1972 Rivergate South Grading.pdf</p> <p>Also see Question 19 Attachments Q19_OilSpillContainment.pdf Q19_OilWaterSeparator.pdf Q19_OilSpillExcavation.pdf Q19_OilSpillContainment Location.pdf (CEII¹) Q19_OilWaterSeparator Location.pdf (CEII¹)</p>
l. all maps and drawings of the Property in your possession; and	<p>Please refer to the attached grading plans and drawings.</p> <p>Also see the figures attached in response to other questions herein.</p>	<p>Question 13 Attachments Q13L_PartialGradeEastYard.pdf Q13L_1989 Rivergate Property Survey.pdf</p>
m. all aerial photographs of the Property in your possession.	<p>Aerial photographs are available at Google Maps, Google Earth, and Portland Maps. The aerial photographs that were available on Portland Maps are attached.</p>	<p>Question 13 Attachments Q13m_Rivergate North Aerial_2001.pdf Q13m_Rivergate North Aerial_2002.pdf Q13m_Rivergate North Aerial_2003.pdf Q13m_Rivergate North Aerial_2004.pdf Q13m_Rivergate North Aerial_2005.pdf Q13m_Rivergate North Aerial_2006.pdf Q13m_Rivergate North Aerial_2007.pdf Q13m_Rivergate South Aerial_2001.pdf Q13m_Rivergate South Aerial_2002.pdf Q13m_Rivergate South Aerial_2003.pdf Q13m_Rivergate South Aerial_2004.pdf Q13m_Rivergate South Aerial_2005.pdf Q13m_Rivergate South Aerial_2006.pdf Q13m_Rivergate South Aerial_2007.pdf</p>
n. all information requested in (a)		

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

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.EPA Question	Response	Records/Information Available
through (m) above regarding, but not limited to, the following:		
i. the Portland General Electric Station L location on 1841 SE Water Ave;	See the separate 104(e) response for Station L.	
ii. the Portland General Electric Station E location on 2635 NW Front Ave;	See the separate 104(e) response for Station E.	
iii. the Portland General Electric Station N location on 6616 N Lombard St.;	See the separate 104(e) response for Station N.	
14. For Properties adjacent to the Willamette River, provide specific information describing the river-ward boundary of private ownership and where state aquatic lands and/or state-management jurisdiction begins. Provide a map that delineates the river-ward boundary of each Property.	Not applicable. The Rivergate Substations are not adjacent to the Willamette River.	
15. For each Property, provide all reports, information or data you have related to soil, water (ground and surface), or air quality and geology/hydrogeology at and about each Property. Provide copies of all documents containing such data and information, including both past and current aerial photographs as well as documents containing analysis or interpretation of such data.	<p>Soil samples have been analyzed in conjunction with various construction projects and spills at the Rivergate Substations. Available information about these samples is summarized below and results are provided in the attached files. To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the known soil sampling at the Rivergate Substations.</p> <p><u>Rivergate North Substation:</u></p> <ul style="list-style-type: none"> 11 January 1999 - A spill occurred in a high voltage area; see the document (Q62_01-11-99_Rivergate North.pdf) attached in response to Question 62. Due to the high voltage area, sampling/cleanup could not be conducted until a power outage. Initial soil sampling occurred on 24 September 1999. A composite of two samples from the spill area was analyzed for PCBs. The detected concentration for the composite sample was 5,400 ppm PCBs; see the attached document (Q15_Rivergate_09-14-1999.pdf). Due to the high voltage area, further sampling/removal could not be conducted until another power outage. <p>In January 2000, follow-up soil characterization sampling was conducted in the general vicinity of the 1999 samples. On 10 January 2000, twenty-two samples were collected and tested; see the attached document (Q15_Rivergate_01-10-2000.pdf). Twenty-one</p>	<p>Question 15 Attachments Q15_Rivergate_09-14-1999.pdf Q15_Rivergate_01-10-2000.pdf Q15_Rivergate_01-14-2000.pdf Q15_Rivergate_01-19-2000.pdf Q15_Rivergate_10-02-2003.pdf Q15_Rivergate_06-14-2004.pdf Q15_Rivergate_10-20-2005.pdf Q15_Rivergate_04-19-2006.pdf</p> <p>Also see Question 19 Attachments Q19_Rivergate North_SPCC Plan.pdf Q19_Rivergate South_SPCC Plan.pdf</p> <p>Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf</p>

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.EPA Question	Response	Records/Information Available
	<p>of the samples had PCB concentrations ranging from non-detect to 1 ppm. One sample collected from a location adjacent to Capacitor Bank 1 had a detected concentration of 9,200 ppm. An initial cleanup was performed in which soil was removed followed by the collection of 7 confirmation samples from around Capacitor Bank 1; see the attached document (Q15_Rivergate_01-14-2000.pdf). Five of the seven confirmation samples had PCB concentrations ranging from 0.27 ppm to 9.3 ppm and two samples had concentrations of 43 ppm and 510 ppm. Additional cleanup was performed with the removal of more soil followed by the collection of two confirmation samples around the two highest PCB locations; see the attached document (Q15_Rivergate_01-19-2000.pdf). These two confirmation samples had detected PCB concentrations of less than 3 ppm. From the two phases of this spill cleanup, a total of 23,940 kg of PCB contaminated soil, gravel, and debris was removed from the Rivergate North Substation and taken to the Arlington Landfill; see the hazardous waste manifest (Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf) attached in response to Question 21a.</p> <ul style="list-style-type: none"> 2 October 2003 – Soil sampling was conducted following construction activities at the Rivergate North Substation. Sixteen soil samples were analyzed for PCBs. The results were all non-detect; see the attached document (Q15_Rivergate_10-02-2003.pdf). To the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate disposal documentation for this soil; however, based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this soil, if disposed of, would have been disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. 20 October 2005 – Gravel sampling was conducted on the stained surface of the street in front of (outside of) the Rivergate North Substation. A gravel sample was tested for petroleum hydrocarbons, select solvents, and PCBs; see the attached document (Q15_Rivergate_10-20-2005.pdf). Although petroleum hydrocarbons were detected, PCBs and the selected solvents were non-detect. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this petroleum hydrocarbon-contaminated gravel was likely disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. <p><u>Rivergate South Substation:</u></p> <ul style="list-style-type: none"> 14 June 2004 – As a result of substation failure and the removal of a buried cable, soil was excavated at the Rivergate South Substation. Nine samples from the excavated soil were tested for PCBs and petroleum hydrocarbons. The results of the soil testing were non-detect for both PCBs and petroleum hydrocarbons; see the attached document (Q15_Rivergate_06-14-2004.pdf). The majority of the soil was left on site. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, any soil not left on site 	<p>Also see all Question 52 Attachments</p> <p>Also see all Question 62 Attachments</p>

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	<p>would have likely been disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility.</p> <ul style="list-style-type: none"> 19 April 2006 – Soil sampling was conducted following construction activities at the Rivergate South Substation. Three soil samples were analyzed for PCBs and petroleum hydrocarbons. The results were all non-detect; see the attached document (Q15_Rivergate_04-19-2006.pdf). To the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate disposal documentation for soil excavated during construction activities; however, based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this soil, if disposed of, would have been disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. <p>For information regarding the disposal of wastes and materials, see the response to Question 21. Also see the spill reports attached in response to Question 62.</p> <p>The SPCC Plans (Q19_Rivergate North_SPCC Plan.pdf and Q19_Rivergate South_SPCC Plan.pdf), attached in response to Question 19, briefly discuss topography and soil condition at the Rivergate Substations.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, the attached documents include all the reports, information, and data PGE was able to locate for the Rivergate Substations related to soil, water (ground and surface), or air quality and geology/hydrogeology.</p>	
<p>16. Identify all past and present solid waste management units or areas where materials are or were in the past managed, treated, or disposed (e.g., waste piles, landfills, surface impoundments, waste lagoons, waste ponds or pits, tanks, container storage areas, etc.) on each Property. For each such unit or area, provide the following information:</p> <p>a. a map showing the unit/area's boundaries and the location of all known units/areas whether currently in operation or not. This map should be drawn to scale, if possible, and clearly indicate the</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, there are no past or present solid waste management units or areas where materials are or were in the past managed, treated, or disposed (e.g., waste piles, landfills, surface impoundments, waste lagoons, waste ponds or pits, tanks, container storage areas, etc.) at the Rivergate Substations.</p>	

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location and size of all past and present units/areas; b. dated aerial photograph of the site showing each unit/area; c. the type of unit/area (e.g., storage area, landfill, waste pile, etc.), and the dimensions of the unit/area; d. the dates that the unit/area was in use; e. the purpose and past usage (e.g., storage, spill containment, etc.); f. the quantity and types of materials (hazardous substances and any other chemicals) located in each unit/area and; g. the construction (materials, composition), volume, size, dates of cleaning, and condition of each unit/area.		
17. If the unit/area described above is no longer in use, how was such unit/area closed and what actions were taken to prevent or address potential or actual releases of waste constituents from the unit/area.	Not applicable to the Rivergate Substations. See the response to Question 16.	
18. For each Property, provide the following information regarding any current or former sewer or storm sewer lines or combined sanitary/storm sewer lines, drains, ditches, or tributaries discharging into the Willamette River:		
a. the location and nature of each sewer line, drain, ditch, or tributary;	To the best of PGE's knowledge, after reasonable inquiry, and based on the documents (Q13b_Rivergate North_Sewer.pdf and Q13b_Rivergate South_Sewer.pdf) attached in response to Question 13b, the Rivergate Substations are not directly serviced by stormwater, sanitary, or combined sewer lines. To the best of PGE's knowledge, after reasonable inquiry, there is no municipal water service to the Rivergate Substations.	See Question 13 Attachments Q13b_Rivergate North_Sewer.pdf Q13b_Rivergate South_Sewer.pdf

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	To the best of PGE's knowledge, after reasonable inquiry, stormwater at the Rivergate Substations infiltrates through the gravel surface. For further details on site stormwater, see the response for Question 13i. To the best of PGE's knowledge, after reasonable inquiry, no discharges from the Rivergate Substations reach the Willamette River.	
b. the date of construction of each sewer line, drain, ditch, or tributary;	Not applicable. See the response to Questions 13i and 18a.	
c. whether each sewer line, or drain was ever connected to a main trunk line;	Not applicable. See the response to Questions 13i and 18a.	
d. whether each sewer line, drain, ditch, or tributary drained any hazardous substance, waste, material or other process residue to the Willamette River; and	To the best of PGE's knowledge, after reasonable inquiry, PGE is unaware of the discharge of waste, material, or other process residue to any sewers, drains, or ditches that drain to the Willamette River.	
e. any documentation regarding but not limited to the following on any and all outfalls to the Willamette River which are located within the boundaries of the Property(ies). Your response should include, but not be limited to:	Not applicable. The Rivergate Substations have no direct outfalls to the Willamette River within their borders.	
i. the areas serviced by the outfalls; and		
ii. the type of outfall (i.e., stormwater or single facility operational).		
19. Provide copies of any stormwater or property drainage studies, including data from sampling, conducted at these Properties on stormwater, sheet flow, or surface water runoff. Also provide copies of any Stormwater Pollution Prevention, Maintenance Plans or Spill Plans developed for different operations during the Respondent's operation of each Property.	<p>The Rivergate Substations SPCC Plans, as well as figures showing site-specific features, including the secondary spill containment system at the Rivergate North Substation, are attached. The SPCC Plans and associated figures are utilized by PGE to ensure that the Rivergate Substations have adequate operating procedures that prevent oil spills, control measures installed to prevent a spill from reaching navigable waters, and countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches navigable waters. The spill containment system at the Rivergate North Substation, which includes the stormwater control and secondary oil spill containment system, captures and contains oil from power equipment in case of leaks or failures. The stormwater control and secondary spill containment system at the Rivergate North Substation is discussed in more detail in the response to Question 13i.</p> <p>General PGE spill clean up procedures are described in the attached documents</p>	<p>Question 19 Attachments</p> <p>Q19_OilSpillContainment.pdf</p> <p>Q19_OilWaterSeparator.pdf</p> <p>Q19_OilSpillExcavation.pdf</p> <p>Q19_OilSpillContainment Location.pdf (CEII¹)</p> <p>Q19_OilWaterSeparator Location.pdf (CEII¹)</p> <p>Q19_Rivergate North_SPCC Plan.pdf</p> <p>Q19_Rivergate South_SPCC Plan.pdf</p> <p>Q19_Environmental Services Oil Spill Instruction.pdf</p> <p>Q19_Oil Spill Cleanup Procedures.pdf</p> <p>Q19_Oil Spill Response Team.pdf</p> <p>Q19_Oil Spill First Response.pdf</p>

¹ Attachment located on the Confidential Critical Energy Infrastructure Information (CEII) CD

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	<p>(Q19_Environmental Services Oil Spill Instruction.pdf, Q19_Oil Spill Cleanup Procedures.pdf, Q19_Oil Spill Response Team.pdf, and Q19_Oil Spill First Response.pdf).</p> <p>To the best of PGE's knowledge, after reasonable inquiry, other than evaluation for SPCC requirements, no drainage studies have been performed at the Rivergate Substations.</p>	
Section 4.0 - Respondent's Operational Activities		
<p>20. Describe the nature of your operation or business activities at each Property. If the operation or business activity changed over time, please identify each separate operation or activity, the dates when each operation or activity was started and, if applicable, ceased.</p>	<p>See the response to Question 5g for a description of the activities performed at the Rivergate Substations. The purpose of the Rivergate Substations is to provide continuous electrical power to customers and to protect the public and equipment from electrical and mechanical faults. The Properties were purchased in 1967 and 1971 and the facilities are still in operation. See the response for Question 13k for a discussion of modifications at the Rivergate Substations.</p>	
<p>21. At each Property, did you ever use, purchase, generate, store, treat, dispose, or otherwise handle any waste, or material? If the answer to the preceding question is anything but an unqualified "no," identify:</p>		
<p>a. in general terms, the nature and quantity of the waste or material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;</p>	<p>Waste and materials have been handled at the Rivergate Substations in conjunction with various operations, construction projects, and spills. To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the known handling of waste and materials at the Rivergate Substations.</p> <p>Most of the functions of a substation are automatic and occur without direct supervision. No wastes, including municipal wastes, are generated during regular operations. Periodically, equipment is taken out of service for off-site maintenance. During these periods, waste material is generated. The primary materials used for maintenance include transformer oil (liquid), solvents (liquid), denatured alcohol (liquid), degreasers (liquid), lubricating grease (semi-liquid), hydraulic fluid (liquid) and paint (liquid). The chemical composition, characteristics, and physical state of materials potentially used at the Rivergate Substations are described in the MSDS documents for the products/materials currently used at PGE properties within Oregon, which are provided in a supplemental submittal (Supplemental Submittal S2).</p> <p><u>Rivergate North Substation:</u></p> <ul style="list-style-type: none"> 25 January 1994 - Two quarts of oil (liquid) were spilled onto gravel (solid), encompassing an area of approximately five square feet; see the document (Q62_1994- 	<p>Question 21 Attachments</p> <p>Q21a_Waste Stream Summary.pdf Q21a_Rivergate North_OilEQ.pdf Q21a_Rivergate South_OilEQ.pdf Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf Q21a_RS 1987-05-14_oil soaked gravel transport.pdf Q21a_RS 1986-9-17_failed cap.pdf Q21a_1980 Oil Filled Equipment.pdf Q21a_1983 Capacitor Report.pdf Q21a_1986 Oil Filled Equipment.pdf Q21a_1986-10-09_transport_Rivergate.pdf Q21a_RS 1986-11-12_non-failed transport.pdf Q21a_1987-01-28_transport_Rivergate.pdf Q21a_RN 1989-03-09_transport.pdf Q21a_2001-10-09_transport_Rivergate.pdf Q21a_HazWaste Manifest 1991-01-22.pdf Q21a_1992-08-27_manifest_RIVERGATE.pdf</p>

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	<p>01-26.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil [solid]). To the best of PGE's knowledge, after reasonable inquiry and based on the attached document (Q21a_Waste Stream Summary.pdf), the approximately 5 square feet of petroleum hydrocarbon-contaminated soil/gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility.</p> <ul style="list-style-type: none"> 25 August 1994 – Hydraulic oil (liquid) was spilled at the Rivergate North Substation, encompassing an area of approximately 2 square feet; see the document (Q62_08-25-1994_Cleanup_Maint Request_Rivergate North.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil [solid]). To the best of PGE's knowledge, after reasonable inquiry and based on the attached document (Q21a_Waste Stream Summary.pdf), the approximately 2 square feet of petroleum hydrocarbon-contaminated soil/gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility. 11 January 1999 – Oil (liquid) from a capacitor spilled in a high voltage area; see the document (Q62_01-11-99_Rivergate North.pdf) attached in response to Question 62. Due to the high voltage area, sampling/cleanup could not be conducted until a power outage. Initial soil sampling occurred on 24 September 1999. A composite of two samples from the spill area was analyzed for PCBs. The detected concentration for the composite sample was 5,400 ppm PCBs; see the document (Q15_Rivergate_09-14-1999.pdf) attached in response to Question 15. Due to the high voltage area, further sampling/removal could not be conducted until another power outage. <p>In January 2000, follow-up soil characterization sampling was conducted in the general vicinity of the 1999 samples. On 10 January 2000, twenty-two samples were collected and tested; see the document (Q15_Rivergate_01-10-2000.pdf) attached in response to Question 15. Twenty-one of the samples had PCB concentrations ranging from non-detect to 1 ppm. One sample collected from a location adjacent to Capacitor Bank 1 had a detected concentration of 9,200 ppm. An initial cleanup was performed in which soil was removed followed by the collection of 7 confirmation samples from around Capacitor Bank 1; see the document (Q15_Rivergate_01-14-2000.pdf) attached in response to Question 15. Five of the seven confirmation samples had PCB concentrations ranging from 0.27 ppm to 9.3 ppm and two samples had concentrations of 43 ppm and 510 ppm. Additional cleanup was performed with the removal of more soil followed by the collection of two confirmation samples around the two highest PCB locations; see the document (Q15_Rivergate_01-19-2000.pdf) attached in response to Question 15. These two confirmation samples had detected PCB concentrations of less than 3 ppm. From the cleanup of the spill, a total of 23,940 kg of PCB contaminated soil, gravel, and debris [solid] was removed from the Rivergate North Substation and disposed of at the Arlington Landfill; see the attached hazardous waste manifest</p>	<p>Also see Question 15 Attachments Q15_Rivergate_09-14-1999.pdf Q15_Rivergate_01-10-2000.pdf Q15_Rivergate_01-14-2000.pdf Q15_Rivergate_01-19-2000.pdf Q15_Rivergate_10-02-2003.pdf Q15_Rivergate_06-14-2004.pdf Q15_Rivergate_10-20-2005.pdf Q15_Rivergate_04-19-2006.pdf</p> <p>Also see Question 33 Attachment Q33_EMC List.pdf</p> <p>Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p> <p>Also see all Question 52 Attachments</p> <p>Also see all Question 62 Attachments</p>

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	<p>(Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf).</p> <ul style="list-style-type: none"> 2 October 2003 – Soil (solid) sampling was conducted following construction activities at the Rivergate North Substation. Sixteen soil samples were analyzed for PCBs. The results of sampling were all non-detect; see the response and document (Q15_Rivergate_10-02-2003.pdf) attached for Question 15. To the best of PGE’s knowledge, after reasonable inquiry, PGE was unable to locate disposal documentation for this soil; however, based on the attached document (Q21a_Waste Stream Summary.pdf), this soil, if disposed of, would have been disposed of at the Hillsboro Landfill under one of PGE’s general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. 8 August, 2005 – Approximately 2 gallons of PCB-containing (≥ 50 ppm) oil (liquid) from a capacitor was released onto the soil, gravel, and capacitor bank steel structure; see the document (Q62_08-08-2005_Rivergate North.pdf) attached in response to Question 62. Analysis of the oil (liquid) indicated that it contained 800,000+ ppm PCBs. The spill was cleaned up immediately and the waste (approximately 5 cubic feet of soil, gravel, and concrete [solid], as well as clean-up material [solid]) was placed in drums. To the best of PGE’s knowledge, after reasonable inquiry and based on the attached document (Q21a_Waste Stream Summary.pdf), the approximately 5 cubic feet of PCB- and petroleum hydrocarbon-contaminated soil/gravel/concrete was likely taken to PSC for interim storage where it was comingled with other ≥ 50 ppm PCB-contaminated material before disposal at the Arlington Landfill. 20 October 2005 – Gravel sampling was conducted on the stained surface of the street in front of (outside of) the Rivergate North Substation. A gravel [solid] sample was tested for petroleum hydrocarbons, select solvents, and PCBs; see the document (Q15_Rivergate_10-20-2005.pdf) attached in response to Question 15. Although petroleum hydrocarbons were detected, PCBs and the selected solvents were non-detect. To the best of PGE’s knowledge, after reasonable inquiry and based on the attached document (Q21a_Waste Stream Summary.pdf), this petroleum hydrocarbon-contaminated gravel was likely disposed of at the Hillsboro Landfill under one of PGE’s general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. <p><u>Rivergate South Substation:</u></p> <ul style="list-style-type: none"> 16 March 1987 – Oil-soaked gravel [solid] was excavated from the Rivergate South Substation; see the attached document (Q21a_RS 1987-05-14_oil soaked gravel transport.pdf). To the best of PGE’s knowledge, after reasonable inquiry, the gravel was contaminated with PCB-containing petroleum hydrocarbons due to a failed capacitor (part of capacitor bank #5); see the attached document (Q21a_RS 1986-9-17_failed cap.pdf). The excavated gravel was transported to Sellwood Substation (a historical PGE waste and handling facility) for interim storage. It was placed in a drop- 	

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	<p>box on 16 March 1987 for pickup and disposal by Chem-Securities at a Chem-Securities landfill appropriate for the PCB content of the gravel. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information or analytical data relating to this remediation.</p> <ul style="list-style-type: none"> 19 June 1989 – Seventy-five gallons of insulating oil (liquid) were released from a transformer tagged as <1ppm PCB; see the document (Q62_1989-6-19_Rivergate spill.pdf) attached in response to Question 62. The release occurred as the transformer was being reinstalled (it had recently been factory repaired). The transformer was supposed to have been shipped to PGE empty; however, when PGE personnel opened it up to set taps and fill with oil, oil spilled out and onto the substation gravel. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the attached document (Q21a_Waste Stream Summary.pdf), the oil-contaminated gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility. 25 August 1994 – Oil (liquid) from a transformer radiator spilled onto the concrete and adjacent gravel surface (solid), encompassing an area of approximately 2 ft by 8 ft; see the document (Q62_08-25-1994_Spill Cleanup_Maint Request_RivergateS.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil [solid]). To the best of PGE's knowledge, after reasonable inquiry and based on the attached document (Q21a_Waste Stream Summary.pdf), the approximately 16 square feet of oil-contaminated soil/gravel was disposed of at the appropriate landfill based on PCB-content after interim storage at a PGE waste and material handling facility. 14 June 2004 – As a result of substation failure and the removal of a buried cable, soil (solid) was excavated at the Rivergate South Substation. The results of soil sampling were non-detect for both PCBs and petroleum hydrocarbons; see the document (Q15_Rivergate_06-14-2004.pdf) attached in response to Question 15. The majority of the soil was left on site. To the best of PGE's knowledge, after reasonable inquiry and based on the attached document (Q21a_Waste Stream Summary.pdf), any soil not left on site would have likely been disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. 19 April 2006 – Soil (solid) sampling was conducted following construction activities at the Rivergate South Substation. The results of soil sampling were non-detect for PCBs and petroleum hydrocarbons; see the document (Q15_Rivergate_04-19-2006.pdf) attached in response to Question 15. To the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate disposal documentation for soil excavated during construction activities; however, based on the attached document (Q21a_Waste Stream 	

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	<p>Summary.pdf), this soil, if disposed of, would have been disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility.</p> <p>See the attached documents (Q21a_Rivergate North_OilEQ.pdf and Q21a_Rivergate South_OilEQ.pdf) for the list of oil-filled substation equipment currently at the Rivergate Substations. The documents identify the detected PCB concentrations of oil-filled equipment at the Rivergate Substations. The attached documents (Q21a_1980 Oil Filled Equipment.pdf, Q21a_1983 Capacitor Report.pdf, and Q21a_1986 Oil Filled Equipment.pdf) describe PGE's oil-filled equipment at the Rivergate Substations in 1980, 1983, and 1986. Other oil-filled equipment transportation and disposal documents include:</p> <ul style="list-style-type: none"> • The attached documents (Q21a_1986-10-09_transport_Rivergate.pdf, Q21a_RS 1986-11-12_non-failed transport.pdf, Q21a_1987-01-28_transport_Rivergate.pdf, Q21a_RN 1989-03-09_transport.pdf, and Q21a_2001-10-09_transport_Rivergate.pdf) are the general transport documents for non-leaking capacitors (oil-filled [liquid] capacitors [solid]) removed from the Rivergate Substations between 1986 and 2001. To the best of PGE's knowledge, after reasonable inquiry and based on the transportation documents, all of these obsolete capacitors were picked up for disposal/recycling by Environmental Systems Company (ENSCO, now Clean Harbors). • The attached document (Q21a_HazWaste Manifest 1991-01-22.pdf) is the hazardous waste manifest for the disposal of approximately 3700kg of PCB-containing oil (liquid), sampling material (solid), glass test vials (solid), and three leaking capacitors (oil-filled [liquid] capacitors [solid]) from the Rivergate South Substation. This waste was transported by Technical Transport Inc to ENSCO (now Clean Harbors) for disposal/recycling. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information associated with these leaking capacitors. • The attached document (Q21a_1992-08-27_manifest_RIVERGATE.pdf) is the hazardous waste manifest for the disposal of approximately 530 kg of PCB-contaminated capacitors from the Rivergate Substations. Eleven oil-filled capacitors (oil-filled [liquid] capacitors [solid]) (7 non-leaking capacitors and 4 leaking capacitors) were transported by PGE to General Electric (GE) for disposal/recycling. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information associated with these leaking and non-leaking capacitors. <p>Soil (solid) and gravel (solid) removed from PGE properties during other site excavations (from other site upgrades or equipment spill response) are tested (for petroleum-hydrocarbon and/or PCB contamination) and disposed of appropriately, as needed.</p> <p>The products/materials currently used at PGE properties within Oregon and potentially used at the Rivergate Substations are listed in the document (Q33_EMC List.pdf) attached in response</p>	

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	<p>to Question 33. Material Safety Data Sheets (MSDS) are provided in a supplemental submittal (Supplemental Submittal S2). Products/materials used in the past are similar to those used currently.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, those companies/persons with whom PGE currently has arrangements for disposal/recycling/destruction of wastes and/or used material are listed in the attached document (Q21a_Waste Stream Summary.pdf). The document summarizes the current various waste stream types, the current initial carrier, the current interim storage (if applicable), the current secondary carrier (if applicable), and the current disposal/recycling facility. To the best of PGE's knowledge, after reasonable inquiry, all companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40.</p>	
<p>b. the chemical composition, characteristics, physical state (e.g., solid, liquid) of each waste or material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;</p>	<p>See the response to Question 21a, which includes the information concerning chemical composition, characteristics, and physical state of each waste or material.</p>	
<p>c. how each such waste or material was used, purchased, generated, stored, treated, transported, disposed or otherwise handled by you; and</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, no waste or materials are/were stored on site. Historically, wastes and used materials from within the Investigation Area were transported either directly to the appropriate disposal facility or to one of PGE's waste and material handling facilities at Harborton Substation (located at 12500 NW Marina Way, Portland, OR), Sellwood Substation (located at 8856 SE 13th Ave), Portland Service Center (PSC) (located at 3700 SE 17th Ave, Portland, Oregon), or Wilsonville (located at 9480 SW Boeckman Rd, Wilsonville, Oregon - only soil/gravel with < 50 ppm PCBs) for interim storage prior to disposal/recycling/destruction. Currently, wastes and used materials that are not transported directly to the appropriate disposal facility are transferred to the current waste and material handling facilities (PSC and Wilsonville [only soil/gravel with < 50 ppm PCBs]) for interim storage prior to disposal/recycling/destruction.</p> <p>Materials potentially contaminated with PCBs are sealed in barrels and transferred to PGE's waste and material handling facility (currently at PSC). Once received at the waste and material handling facility, these wastes are tested to determine a disposal location appropriate for their PCB concentration or assumed to contain PCBs. These wastes include:</p> <ul style="list-style-type: none"> • Used/excess lubricants, oils, and other fluids • Obsolete equipment (e.g., transformers, capacitors) • Rags used to clean equipment • Absorbent material used to clean up leaks or spills • Ballasts <p>Wastes not contaminated with PCBs (< 50 ppm) are containerized separately and transferred to</p>	<p>Question 21 Attachments</p> <p>Q21c_Cleaning Up Small Mercury Spills 2008.pdf</p> <p>Q21c_HID and Fluorescent Tube Storage Instructions.pdf</p> <p>Q21c_PGE Aerosol Can Disposal Flowchart 2006.pdf</p> <p>Q21c_PGE Battery Flow Chart 2007.pdf</p> <p>Q21c_PGE Bulb & Tube Recycling Flowchart 2006.pdf</p> <p>Q21a_Waste Stream Summary.pdf</p> <p>Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf</p> <p>Q21a_RS 1987-05-14_oil soaked gravel transport.pdf</p> <p>Q21a_RS 1986-9-17_failed cap.pdf</p> <p>Q21a_Rivergate North_OilEQ.pdf</p> <p>Q21a_Rivergate South_OilEQ.pdf</p> <p>Q21a_1980 Oil Filled Equipment.pdf</p> <p>Q21a_1983 Capacitor Report.pdf</p> <p>Q21a_1986 Oil Filled Equipment.pdf</p> <p>Q21a_1986-10-09_transport_Rivergate.pdf</p> <p>Q21a_RS 1986-11-12_non-failed transport.pdf</p> <p>Q21a_1987-01-28_transport_Rivergate.pdf</p> <p>Q21a_RN 1989-03-09_transport.pdf</p> <p>Q21a_2001-10-09_transport_Rivergate.pdf</p> <p>Q21a_HazWaste Manifest 1991-01-22.pdf</p> <p>Q21a_1992-08-27_manifest_RIVERGATE.pdf</p>

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.EPA Question	Response	Records/Information Available
	<p>PGE's waste and material handling facility (currently at PSC). The Toxic Substances Control Act (TSCA) regulation standard and accepted industry standard is to use the term "non-PCB" to describe oils with < 50 ppm PCBs; this term is used throughout this document. Non-PCB wastes include:</p> <ul style="list-style-type: none"> • Solvents • Batteries • Scrap metal • Light bulbs • General garbage and recycling <p>Soil and gravel removed during excavations (from upgrades or equipment spill response) is tested and disposed of appropriately. The soil and gravel are either transported directly from the site to the disposal facility, or are transported to Wilsonville and/or PSC for interim storage before bulk disposal at a location dependant upon PCB content. See the response and documents attached for Question 21a for how the known remediation wastes were handled by PGE.</p> <p>See the attached documents (Q21a_Rivergate North_OilEQ.pdf and Q21a_Rivergate South_OilEQ.pdf) for the list of oil-filled substation equipment currently at the Rivergate Substations. The documents (Q21a_1980 Oil Filled Equipment.pdf, Q21a_1983 Capacitor Report.pdf, and Q21a_1986 Oil Filled Equipment.pdf) attached in response to Question 21a describe PGE's oil-filled equipment at the Rivergate Substations in 1980, 1983, and 1986. Also see the response and documents attached for Question 21a for how the obsolete capacitors were handled by PGE.</p> <p>See the attached documents for descriptions of PGE's waste and used material handling procedures. The attached mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at the Rivergate Substations. Also see the response and documents for Questions 15, 21a, 21c, 52, and 62.</p> <p>The Harborton Substation, which was historically a PGE waste and material handling facility, is within the Investigation Area and is addressed in a separate 104(e) response. Also, see the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).</p>	<p>Also see all Question 15 Attachments</p> <p>Also see all Question 52 Attachments</p> <p>Also see all Question 62 Attachments</p>
<p>d. the quantity of each such waste or material used, purchased, generated, stored, treated, transported, disposed or otherwise handled by you.</p>	<p>Waste was generated during substation operations associated with equipment maintenance and upgrades. To the best of PGE's knowledge, after reasonable inquiry, PGE has no information on the exact quantities of oil or routine maintenance waste removed from the Rivergate Substations.</p> <p>Soil and gravel removed during excavations (from upgrades or equipment spill response) is tested and disposed of appropriately. The soil and gravel are either transported directly from the site to the disposal facility, or are transported to Wilsonville and/or PSC for interim storage before bulk disposal at a location dependant upon PCB content. See the response to Question</p>	<p>Question 21 Attachments</p> <p>Q21a_Waste Stream Summary.pdf</p> <p>Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf</p> <p>Q21a_RS 1987-05-14_oil soaked gravel transport.pdf</p> <p>Q21a_RS 1986-9-17_failed cap.pdf</p> <p>Q21a_Rivergate North_OilEQ.pdf</p> <p>Q21a_Rivergate South_OilEQ.pdf</p> <p>Q21a_1980 Oil Filled Equipment.pdf</p> <p>Q21a_1983 Capacitor Report.pdf</p>

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.EPA Question	Response	Records/Information Available
	<p>21a for the quantity of the known remediation wastes handled by PGE.</p> <p>See the attached documents (Q21a_Rivergate North_OilEQ.pdf and Q21a_Rivergate South_OilEQ.pdf) for the list of oil-filled substation equipment currently at the Rivergate Substations. The documents (Q21a_1980 Oil Filled Equipment.pdf, Q21a_1983 Capacitor Report.pdf, and Q21a_1986 Oil Filled Equipment.pdf) attached in response to Question 21a describe PGE's oil-filled equipment at the Rivergate Substations in 1980, 1983, and 1986. Also see the response to Question 21a for the information concerning the quantity of obsolete capacitors handled by PGE</p> <p>See the response and documents for Questions 15, 21a, 21c, and 62. Also see the waste and materials documentation provided in the separate 104(e) response for the Harborton Substation, which was historically a waste and material handling facility and is within the Investigation Area, and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).</p>	<p>Q21a_1986 Oil Filled Equipment.pdf Q21a_1986-10-09_transport_Rivergate.pdf Q21a_RS 1986-11-12_non-failed transport.pdf Q21a_1987-01-28_transport_Rivergate.pdf Q21a_RN 1989-03-09_transport.pdf Q21a_2001-10-09_transport_Rivergate.pdf Q21a_HazWaste Manifest 1991-01-22.pdf Q21a_1992-08-27_manifest_RIVERGATE.pdf</p> <p>Also see all Question 15 Attachments</p> <p>Also see all Question 62 Attachments</p>
<p>22. Describe all activities at each Property that was conducted over, on, or adjacent to, the Willamette River. Include in your description whether the activity involved hazardous substances, waste(s), or materials and whether any such hazardous substances, waste(s), or materials were discharged, spilled, disposed of, dropped, or otherwise came to be located in the Willamette River.</p>	<p>Not applicable. The Rivergate Substations are not located adjacent to the Willamette River.</p>	
<p>23. For each Property at which there was or is a mooring facility, dock, wharf or any over-water structure, provide a summary of over-water activities conducted at the structure, including but not limited to, any material loading and unloading operations associated with vessels, materials handling and storage practices, ship berthing and anchoring, ship fueling, and ship building, retrofitting, maintenance, and repair.</p>	<p>Not applicable. The Rivergate Substations do not have docks or other over-water facilities.</p>	

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.EPA Question	Response	Records/Information Available
<p>24. Describe all activities conducted on leased aquatic lands at each Property. Include in your description whether the activity involved hazardous substances, waste, or materials and whether any such hazardous substances, waste, or materials were discharged, spilled, disposed of, dropped, or otherwise came to be located on such leased aquatic lands.</p>	<p>Not applicable. There are no leased aquatic lands at the Rivergate Substations.</p>	
<p>25. Please describe the years of use, purpose, quantity, and duration of any application of pesticides or herbicides on each Property during the period of investigation (1937 to the present). Provide the brand name of all pesticides or herbicides used.</p>	<p>Several herbicides have been used at the Rivergate Substations to control vegetation growth. From 1992 through 2007, one or more herbicides (i.e., Oust, Diuron, Princep, Pendulum, Landmark, Portfolio, and/or Garlon4) were used at the Rivergate Substations. To the best of PGE's knowledge, after reasonable inquiry, the following are the quantities applied (when applied):</p> <ul style="list-style-type: none"> • Oust – 2-4 oz per acre • Diuron – 5-6 lbs per acre • Princep – 5 lbs per acre • Pendulum – 5 lbs per acre • Landmark – 4.5 oz per acre • Portfolio – 4 oz per acre • Garlon 4 – as needed for spot brush control <p>See the attached documents for further details on the known herbicide application history.</p>	<p>Question 25 Attachments Q25_Rivergate North_Herb Application History.pdf Q25_Rivergate South_Herb Application History.pdf</p>
<p>26. Describe how wastes transported off the Property for disposal are and ever were handled, stored, and/or treated prior to transport to the disposal facility.</p>	<p>No waste or materials are stored onsite. Wastes and used materials from within the Investigation Area are either transported directly to the appropriate disposal facility or transported to a PGE waste and material handling facility for interim storage prior to disposal/recycling/destruction. Historically, PGE's waste and material handling facilities were Harborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, PGE's waste and material handling facilities are PSC and Wilsonville (only soil/gravel with < 50 ppm PCBs).</p> <p>For further waste information, see the response and documents for Questions 21 and 52.</p>	<p>See all Question 21 Attachments Also see all Question 52 Attachments</p>

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.EPA Question	Response	Records/Information Available
27. Has Respondent ever arranged for disposal or treatment or arranged for transportation for disposal or treatment of materials to any Property (including the Willamette River) within the Investigation Area? If so, please identify every Property that Respondent's materials were disposed or treated at in the Investigation Area. In addition, identify:	To the best of PGE's knowledge, after reasonable inquiry, waste and materials were not disposed of at the Rivergate Substations. To the best of PGE's knowledge, after reasonable inquiry, no wastes were disposed of into the Willamette River.	See all Question 21 Attachments
a. the persons with whom the Respondent made such arrangements;	<p>In general, waste and used material from within the Investigation Area are either transported directly to the appropriate disposal facility or transported to a PGE waste and material handling facility for interim storage prior to disposal/recycling/destruction. Historically, PGE's waste and material handling facilities were Harborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, PGE's waste and material handling facilities are PSC and Wilsonville (only soil/gravel with < 50 ppm PCBs). The Harborton Substation is within the Investigation Area and is addressed in a separate 104(e) response.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, companies with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40. To the best of PGE's knowledge, after reasonable inquiry, those companies currently used are listed in the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a. Of those listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40, those companies within the Investigation Area are summarized in the attached document (Q27_Waste-Materials Receivers within IA.pdf) and include the following:</p> <ul style="list-style-type: none"> • Acme Trading & Supply – located at 4927 NW Front Ave, Portland, OR • AGG Enterprises Inc. – located at 555 N Channel Ave, Portland, OR • Ash Grove Cement Company – located at 13939 N Rivergate Blvd, Portland, OR • Bingham Willamette (now Sulzer Pumps) – located at 2800 NW Front Ave, Portland, OR • Calbag Metals – located at 2495 NW Nicolai St and 12005 N Burgard Way, Portland, OR • Cascade General Inc – located at 5555 N Channel Rd, Portland, OR • General Electric Company – located at 2535 NW 28th Ave, Portland, OR • Northwest Natural Gas Co – located at 123 NW Flanders, Portland, OR • Nudleman & Sons – located at 2707 NW Nela, Portland, OR • Oregon Hydrocarbon/TPS Technologies – located at 9333 N Harborage St, Portland, OR • Port of Portland – located at 121 NW Everett Street, Portland, OR • Schnitzer Steel – located at 3200 NW Yeon Ave and 12005 N Burgard Way, Portland, OR 	<p>See Question 27 Attachment Q27_Waste-Materials Receivers within IA.pdf</p> <p>Also see all Q21 Attachments</p> <p>Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p>

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.EPA Question	Response	Records/Information Available
	<ul style="list-style-type: none"> • Tyee Construction Company of Oregon – located at 12005 Burgard Way, Portland, OR • Univar – located at 3950 NW Yeon Ave and 10821 N Lombard St, Portland, OR • Western Steel Cast – located at 3070 SW Moody, Portland, OR <p>To the best of PGE’s knowledge, after reasonable inquiry, only General Electric Company (listed above in bold) has been identified as having received waste from the Rivergate Substations based on the response and documents attached in response to Question 21. General Electric Company (GE) received obsolete capacitors from the Rivergate Substations, after interim storage at the Sellwood Substation (a historical PGE waste and material handling facility); see the hazardous waste manifest (Q21a_1992-08-27_manifest_RIVERGATE.pdf) attached in response to Question 21a.</p> <p>The other (non-bold) companies listed above have historically received or currently receive waste and/or used materials from the PGE waste and material handling facilities, which may have included waste and/or used material from the Rivergate Substations. The Harborton Substation, a historical PGE waste and materials handling facility, is within the Investigation Area and is addressed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).</p>	
b. every date on which Respondent made such arrangements;	<p>The only company positively identified by PGE as having received waste or used material from the Rivergate Substations is GE (listed in bold in response to Question 27a). Obsolete capacitors were removed from the Rivergate Substations in July 1992 and transported to the Sellwood Substation (a historical PGE waste and material handling facility) for interim storage. In August 1992, the obsolete capacitors were transported to GE. See the hazardous waste manifest (Q21a_1992-08-27_manifest_RIVERGATE.pdf) attached in response to Question 21a.</p> <p>Additional available general PGE contract, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response, the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Station E Substation (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).</p>	<p>See all Question 21 Attachments</p> <p>Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p>
c. the nature, including the chemical content, characteristics, physical state (e.g., solid, liquid) and quantity (volume and weight) of all materials involved in each such arrangement;	<p>Historically, used oil and maintenance waste (including petroleum hydrocarbon and/or PCB contaminated waste) were transported to Harborton Substation, Sellwood Substation, or PSC for interim storage prior to disposal or recycling. Currently, used oil and maintenance waste are transported to PSC for interim storage prior to disposal or recycling. The amount of waste generated during substation operations associated with equipment maintenance varied between substations/properties. To the best of PGE’s knowledge, after reasonable inquiry, PGE has no information regarding the exact quantities/characteristics of oil or routine maintenance waste removed from the substations/properties. The Harborton Substation is within the Investigation Area and is discussed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).</p>	<p>See all Q21 Attachments</p> <p>Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p>

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.EPA Question	Response	Records/Information Available
	<p>To the best of PGE’s knowledge, after reasonable inquiry, disposal/recycling facilities with which PGE has made arrangements for disposal/recycling of wastes for PGE properties in Oregon are listed in the document (Q40_Waste-Materials Receivers and Carriers.pdf) attached in response to Question 40. The document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a summarizes the current various waste stream types, the current initial carrier, the current interim storage (if applicable), the current secondary carrier (if applicable), and the current disposal/recycling facility. Of those listed, the following is a description of the waste and used material disposed/recycled at facilities within the Investigation Area:</p> <ul style="list-style-type: none"> • Acme Trading & Supply – Used (but not obsolete) transformers (solid) and ballasts (solid) • AGG Enterprises Inc. – Mixed non-hazardous waste (various) and recyclables • Ash Grove Cement Company – PCB waste: oil (liquid) with PCBs < 50 ppm • Bingham Willamette (now Sulzer Pumps) – Used (but not obsolete) transformers (solid) and oil circuit breakers (solid) • Calbag Metals – Scrap metal (solid) and empty aerosol cans (solid) • Cascade General Inc – Non-hazardous liquid waste/material: mineral oil (liquid) with PCBs < 50 ppm • General Electric Company – Oil with PCBs ≥ 50 ppm (liquid) and obsolete equipment (solid) with trace levels of PCBS ≥ 50 ppm Used (but not obsolete) transformers (solid) • Northwest Natural Gas Co – Transformer oil (liquid) • Nudleman & Sons – Scrap copper (solid) • Oregon Hydrocarbon/TPS Technologies – Solidified contents of USTs (solid) and petroleum hydrocarbon-contaminated soil (solid) • Port of Portland – Used (but not obsolete) transformers (solid) and ballasts (solid) • Schnitzer Steel – Scrap metal (solid) and empty aerosol cans (solid) • Tyee Construction Company of Oregon – Transformers (solid) • Univar – Used transformer/insulating oil (liquid, <1 ppm PCBs), used rags/absorbent material from leaks or spills (solid, <5 ppm PCBs), and used transformer/insulating oil (liquid, ≥ 50 ppm PCBs) • Western Steel Cast – Transformers (solid) <p>To the best of PGE’s knowledge, after reasonable inquiry, only GE (listed above in bold) was identified by PGE as having received waste or used material from the Rivergate Substations. Based on the response and documents for Question 21, GE received 11 obsolete capacitors (solid, metal with petroleum hydrocarbons and PCBs, approximately 530 kg) from the Rivergate Substations after interim storage at the Sellwood Substation (a historical PGE waste and material handling facility). See the hazardous waste manifest (Q21a_1992-08-27_manifest_RIVERGATE.pdf) attached in response to Question 21a.</p> <p>The other (non-bold) companies listed above have historically received or currently receive waste and/or used materials from the PGE waste and material handling facilities, which may have included waste and/or used material from the Rivergate Substations. The Harborton</p>	

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.EPA Question	Response	Records/Information Available
	Substation, a historical PGE waste and material handling facility, is within the Investigation Area and is addressed in a separate 104(e) response. Also see the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).	
d. in general terms, the nature and quantity of the non- hazardous materials involved in each such arrangement;	See the response to Question 27c.	
e. in general terms, the nature and quantity of any hazardous materials involved in each such arrangement;	See the response to Question 27c.	
f. the owner of the materials involved in each such arrangement, if not Respondent;	Not applicable. PGE was the generator of the waste.	
g. all tests, analyses, analytical results or manifests concerning each hazardous material involved in such transactions;	See the response to Question 27c.	
h. the address(es) for each Property, precise locations at which each material involved in such transactions actually was disposed or treated;	See the response to Question 27a.	
i. the owner or operator of each facility at which hazardous or non-hazardous materials were arranged to be disposed at within the Investigation Area;	See the response to Question 27a.	
j. who selected the location to which the materials were to be disposed or treated;	PGE personnel in charge of environmental matters and consultants. See the response and documents attached for Question 38, as well as the documents attached in response to Question 6g.	See Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIC Structure Info 1982-2007.pdf Q06g_Organizational Charts.pdf Also see all Question 38 Attachments
k. who selected the Property as the location at which hazardous materials were to be disposed or treated; and	PGE personnel in charge of environmental matters and consultants. See the response and documents attached for Question 38, as well as the documents attached in response to Question 6g.	See Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIC Structure Info 1982-2007.pdf Q06g_Organizational Charts.pdf

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.EPA Question	Response	Records/Information Available
		Also see all Question 38 Attachments
I. any records of such arrangement and each shipment.	See the response to Question 27c.	
28. Describe the plants and other buildings or structures where Respondent carried out its operations at each Property within the Investigation Area (excluding locations where ONLY clerical/office work was performed).	<p>Rivergate North Substation Buildings / Structures include:</p> <ul style="list-style-type: none"> • Control building -40 ft x 20 ft prefabricated, steel panel construction, single level building. • Transmission structure – open frame structural steel supporting 230kv bus. • Transmission structure – open frame structural steel supporting 115kv bus. • Capacitor racks – open frame structural steel supporting station capacitors and associated equipment. • Communication tower – Steel lattice structure <p>Rivergate South Substation Buildings / Structures include:</p> <ul style="list-style-type: none"> • Control building -5 ft x 5 ft prefabricated, steel panel construction, single level building. • Transmission structure – open frame structural steel supporting 115kv bus • Distribution structure – open frame structural steel supporting 13kv bus. • Capacitor racks – open frame structural steel supporting station capacitors and associated equipment. • Capacitor banks – metal enclosed switchgear structures. <p>For further details, see the response to Question 13d.</p>	
29. Provide a schematic diagram or flow chart that fully describes and/or illustrates the Respondent's operations on each Property.	<p>Historical operations on this property include building construction, equipment installation, power distribution (unmanned), equipment maintenance, and equipment decommissioning.</p> <p>Current operations on this property are limited to equipment installation, power distribution (unmanned), equipment maintenance, and equipment decommissioning.</p> <p>See the attached documents.</p>	<p>Question 29 Attachments</p> <p>Q29_Substation Lifecycle.pdf</p> <p>Q29_Operations-Waste Schematic.pdf</p>
30. Provide a brief description of the nature of Respondent's operations at each location on each Property including:		
a. the date such operations commenced and concluded; and	Parcel I was purchased on 4 October 1967 from Dulien Steel Products. Parcel III was purchased from Union Carbide Company on 9 July 1971. Since those purchase dates to present, the parcels have been used exclusively for the Rivergate Substations operations.	

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.EPA Question	Response	Records/Information Available
<p>b. the types of work performed at each location, including but not limited to the industrial, chemical, or institutional processes undertaken at each</p>	<p>Equipment maintenance activities: Maintenance of equipment, generation of maintenance waste, disposal of maintenance waste, and removal of obsolete equipment.</p> <p>Construction activities: Excavation, erection of substation structures, welding, painting, wiring, carpentry, installing equipment, and assembly of large equipment.</p> <p>Substation activities: Power distribution, operation of equipment, routine maintenance, cleaning, inspection of equipment, minor painting, transfer of oil from supply tanks to equipment, transfer of oil between equipment and temporary storage tanks, renewal of lubricants and various consumable fluids, reconfiguration of equipment, upgrade of equipment components, and testing and calibration of equipment.</p> <p>See the documents attached in response to Question 29, as well as the responses to Questions 5g, 13d, and 13k.</p>	<p>See all Question 29 Attachments</p>
<p>31. If the nature or size of Respondent's operations changed over time, describe those changes and the dates they occurred.</p>	<p>See responses provided for Questions 5d, 13d, and 13k.</p>	
<p>32. List the types of raw materials used in Respondent's operations, the products manufactured, recycled, recovered, treated, or otherwise processed in these operations.</p>	<p>Substation activities: No raw materials are/were used in the operation of the substations. No products are/were manufactured, recycled, recovered, treated, or processed during operation.</p>	
<p>33. Provide copies of Material Safety Data Sheets (MSDS) for materials used in the Respondent's operations.</p>	<p>The products/materials currently used at PGE properties within Oregon and potentially used at the Rivergate Substations are listed in the attached document (Q33_EMC List.pdf). Material Safety Data Sheets (MSDS) for these products/materials are provided in a supplemental submittal (Supplemental Submittal S2). Products/materials used in the past are similar to those used currently.</p>	<p>Question 33 Attachment Q33_EMC List.pdf</p>
<p>34. Describe the cleaning and maintenance of the equipment and machinery involved in these operations, including but not limited to:</p>	<p>Substation Maintenance Activities: Routine visual inspections are performed once a month on most of the electrical equipment, including transformers, breakers, switches, regulators, motor operators, meters & relays, and batteries. Lighting systems are visually inspected and operation tests are performed once a month. Inspection of the control systems are performed as needed.</p> <p>Substation Cleaning Activities: Cleaning of electrical equipment varies. Large transformers are cleaned annually, breakers are cleaned based on the number of operations and time since the</p>	<p>Question 34 Attachment Q34_Maintenance Activities.pdf</p> <p>Also see Question 21 Attachment Q21a_Waste Stream Summary.pdf</p> <p>Also see all Question 29 Attachments</p>

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.EPA Question	Response	Records/Information Available
	<p>last inspection, switches are cleaned as needed, insulators are cleaned during scheduled outages, regulators are cleaned or replaced as needed, meters and relays are cleaned during routine calibration, batteries are cleaned approximately twice a year, and the non-electrical surfaces of control systems are cleaned during major construction.</p> <p>Please see the attached cleaning and maintenance activities document (Q34_Maintenance Activities.pdf) for further details, as well as the response and documents for Question 29, and the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a.</p>	
a. the types of materials used to clean/maintain this equipment-machinery;	The primary materials that may have been used for equipment maintenance include transformer oil, solvents, denatured alcohol, degreasers, lubricating grease, hydraulic fluid, and paint.	
b. the monthly or annual quantity of each such material used.	The materials used for equipment maintenance are/were not stored onsite, but are brought to the site as needed. To the best of PGE's knowledge, after reasonable inquiry, no detailed logs of exact quantities of maintenance materials used or oil/routine maintenance waste removed from the substations/properties are available.	
c. the types of materials spilled in Respondent's operations;	Materials potentially spilled during operations include oil and fluid from equipment spills or leaks.	
d. the materials used to clean up those spills;	<p>The following are PGE general spill response procedures.</p> <ul style="list-style-type: none"> • Minor equipment spills or leaks are cleaned up using sorbent materials. • Major spills are cleaned up using sorbent materials, berms, and necessary equipment. <p>For further details, see the responses and documents for Question 19 and the response and documents (Q21a_Waste Stream Summary.pdf and Q21c_Cleaning Up Small Mercury Spills 2008.pdf) for Question 21. The mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at the Rivergate Substations.</p>	<p>See all Question 19 Attachments</p> <p>Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf</p>
e. the methods used to clean up those spills; and	<p>Minor equipment spills or leaks are cleaned up as needed by wiping up the oil/fluid with on-hand absorbent materials.</p> <p>Major spills are immediately reported to the System Control Center. PGE's spill response crew is dispatched to clean up the oil. Soiled material is placed into a marked barrel and disposed of properly. For further details, see the responses and documents for Question 19 and the response and documents (Q21a_Waste Stream Summary.pdf and Q21c_Cleaning Up Small Mercury Spills 2008.pdf) for Question 21. The mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at the Rivergate Substations.</p>	<p>See all Question 19 Attachments</p> <p>Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf</p>
f. where the materials used to clean up those spills were disposed of.	<p>Materials potentially contaminated with PCBs are sealed in barrels and transferred to PGE's waste and material handling facility (historically at Harborton Substation, Sellwood Substation, or PSC; currently at PSC). If not ascertainable from testing the equipment generating the spill, these wastes are tested to determine a disposal location appropriate for its PCB concentration once they are received at the waste and material handling facility.</p> <p>Materials containing PCBs are disposed at different facilities depending on the concentration of the originally spilled materials, if known, or the concentration in the waste materials. Wastes</p>	<p>See all Question 21 Attachments</p>

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	not contaminated with PCBs are containerized separately and transferred to PGE's waste and material handling facility (historically at Harborton Substation, Sellwood Substation, or PSC; currently at PSC). For further details, see the response and documents for Question 21.	
35. Describe the methods used to clean up spills of liquid or solid materials during Respondent's operation.	<p>Minor spills or leaks are cleaned up as they occur. The fluid is wiped up with on-hand absorbent materials. Major spills are immediately reported to the PGE System Control Center. PGE's spill response crew is dispatched to clean up the oil. Soiled material is placed into a marked barrel and disposed of properly.</p> <p>For further details, see the responses and documents for Question 19 and the response and documents (Q21a_Waste Stream Summary.pdf and Q21c_Cleaning Up Small Mercury Spills 2008.pdf) for Question 21. The mercury spill cleanup guide is a general PGE guidance and does not imply that mercury spills have ever occurred at this Site.</p>	<p>See Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21c_Cleaning Up Small Mercury Spills 2008.pdf</p>
<p>36. For each type of waste (including by-products) from Respondent's operations, including but not limited to all liquids, sludges, and solids, provide the following information:</p> <p>a. its physical state;</p> <p>b. its nature and chemical composition;</p> <p>c. its color;</p> <p>d. its odor.</p> <p>e. the approximate monthly and annual volumes of each type of waste (using such measurements as gallons, cubic yards, pounds, etc.); and</p> <p>f. the dates (beginning & ending) during which each type of waste was produced by Respondent's operations.</p>	<p>PGE operational waste varies month to month and year to year. The following is a summary of the type of wastes generated from the historical and current operations at the Site.</p> <p>Remediation waste at Rivergate North Substation includes:</p> <ul style="list-style-type: none"> • Gravel and soil contaminated with petroleum hydrocarbons – solid, petroleum hydrocarbons, brown/black, petroleum hydrocarbon odor, approximately 5 square feet, January 1994. • Gravel and soil contaminated with petroleum hydrocarbons – solid, petroleum hydrocarbons, brown/black, petroleum hydrocarbon odor, approximately 2 square feet, August 1994. • Gravel and soil contaminated with petroleum hydrocarbons and PCBs – solid, petroleum hydrocarbons and PCBs, brown/black, petroleum hydrocarbon odor, 23,940 kg, January 1999 – January 2000. • Gravel and soil contaminated with petroleum hydrocarbons and PCBs – solid, petroleum hydrocarbons and PCBs, brown/black, petroleum hydrocarbon odor, approximately 5 cubic feet, August 2005. • Gravel and soil contaminated with petroleum hydrocarbons from the street in front of (outside of) the Rivergate North Substation – solid, petroleum hydrocarbons, brown/black, petroleum hydrocarbon odor, unknown, October 2005. <p>Remediation waste at Rivergate South Substation includes:</p> <ul style="list-style-type: none"> • Gravel and soil contaminated with petroleum hydrocarbons – solid, petroleum hydrocarbons, brown/black, petroleum hydrocarbon odor, unknown, March 1987. • Gravel and soil contaminated with petroleum hydrocarbons – solid, petroleum hydrocarbons, brown/black, petroleum hydrocarbon odor, unknown, June 1989. • Gravel and soil contaminated with petroleum hydrocarbons – solid, petroleum hydrocarbons, brown/black, petroleum hydrocarbon odor, 16 square feet, August 1994. <p>General materials/wastes potentially contaminated with PCBs include:</p>	<p>See all Question 15 Attachments</p> <p>Also see all Question 21 Attachments</p> <p>Also see Question 33 Attachment Q33 EMC List.pdf</p>

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	<ul style="list-style-type: none"> • Used/excess lubricants, oils, and other fluids – liquid, petroleum hydrocarbons, various, petroleum hydrocarbon odor, unknown, 1963-present • Obsolete equipment (e.g., transformers, capacitors) – solid, metal, metallic/petroleum hydrocarbon odor, unknown, 1960s-present • Rags used to clean equipment – solid, fabric material, various, alcohol-petroleum hydrocarbon odor, unknown, 1963-present • Absorbents used to clean up leaks or spills – solid, absorbent material, various, petroleum hydrocarbon odor, unknown, 1960s-present • Ballasts – solid, metallic, electrical lamp component, various, no odor, unknown, 1960s-present • Soils removed in response to spills or leaks – solid, petroleum hydrocarbon- and PCB-contaminated soil, black, petroleum hydrocarbon-sweet odor, unknown, 1960s-present <p>General materials/wastes not contaminated with PCBs include:</p> <ul style="list-style-type: none"> • Solvents – liquid, oil-based chemical solvents, petroleum hydrocarbon smell, unknown quantity, 1960s-present • Batteries – solid, alkaline/zinc-carbon/lithium-based batteries, no odor, unknown quantity, 1960s-present • Scrap metal – solid, metallic (e.g., steel), none to metallic odor, unknown quantity, 1960s-present • Light bulbs – solid, incandescent and fluorescent light bulbs, no odor, unknown quantity, 1960s-present • General garbage – mixed composition, various colors, various odors, unknown quantity, 1960s-present • Construction debris – mixed composition, various colors, various odors, unknown quantity, 1960s-present • Soils removed during excavation for equipment/building demolition/installation – solid, soil, brown, organic odor, unknown, 1960s-present <p>Also see the MSDS documents provided in a supplemental submittal (Supplemental Submittal S2), documents attached in response to Question 15, and the responses and documents for Question 21. Also see the separate 104(e) response for the Harborton Substation (historically at PGE waste and used material handling facility) and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).</p>	
37. Provide a schematic diagram that indicates which part of Respondent's operations generated each type of waste, including but not limited to wastes generated by cleaning and maintenance of equipment and machinery and wastes	See the response and documents for Question 29, as well as the document (Q21a_Waste Stream Summary) attached in response to Question 21a.	<p>See all Question 29 Attachments</p> <p>Also see Question 21 Attachment Q21a_Waste Stream Summary.pdf</p>

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resulting from spills of liquid materials.		
38. Identify all individuals who currently have and those who have had responsibility for Respondent's environmental matters (e.g. responsibility for the disposal, treatment, storage, recycling, or sale of Respondent's wastes). Also provide each individual's job title, duties, dates performing those duties, supervisors for those duties, current position or the date of the individual's resignation, and the nature of the information possessed by such individuals concerning Respondent's waste management.	See the attached documents for a listing of those responsible for environmental matters 1980 - present. See the attached 1993 and 1997 Job Descriptions for Environmental Services Manager. See the attached document for management structural information 1982-2008. Also see the documents attached in response to Question 6g.	<p>Question 38 Attachments Q38_Res. For Environmental Matters.pdf Q38_Mgr. Env. Svc. Job description – 1993.pdf Q38_Mgr. Env. Svc. Job description – 1997.pdf Q38_HRIS Structure Info. 1982-2008-4.0.pdf</p> <p>Also see Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Organizational Charts.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIS Structure Info 1982-2007.pdf</p>
39. For each type of waste describe Respondent's contracts, agreements or other arrangements for its disposal, treatment, or recycling.	<p>In general terms, waste and used material was historically either transferred directly to the disposal facility, or to one of the following PGE waste and used material handling facilities for interim storage: Harborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, in general terms, waste and used materials are either transferred directly to the disposal facility or to one of the following PGE waste and used material handling facilities: PSC or Wilsonville (only soil/gravel with < 50 ppm PCBs).</p> <p>To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the documentation attached in response to Question 21. Waste disposal permits are attached in response to Question 52. Additional available general PGE contract, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response, the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).</p>	<p>See all Question 21 Attachments</p> <p>Also see all Question 52 Attachments</p>

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<p>40. Provide copies of such contracts and other documents reflecting such agreements or arrangements, including but not limited to:</p> <p>a. state where Respondent sent each type of its waste for disposal, treatment, or recycling;</p> <p>b. identify all entities and individuals who picked up waste from Respondent or who otherwise transported the waste away from Respondent's operations (these companies and individuals shall be called "Waste Carriers" for purposes of this Information Request);</p> <p>c. if Respondent transported any of its wastes away from its operations, please so indicate;</p> <p>d. for each type of waste specify which Waste Carrier picked it up;</p> <p>e. indicate the ultimate disposal/recycling/treatment location for each type of waste.</p> <p>f. provide all documents indicating the ultimate disposal/recycling/treatment location for each type of waste; and</p> <p>g. state the basis for and provide any documents supporting the answer to the previous question.</p>	<p>In general terms, waste and used material was historically either transferred directly to the disposal facility or to one of the following PGE waste and used material handling facilities for interim storage: Harborton Substation, Sellwood Substation, PSC, or Wilsonville (only soil/gravel with < 50 ppm PCBs). Currently, in general terms, waste and used materials are either transferred directly to the disposal facility or to one of the following PGE waste and used material handling facilities: PSC or Wilsonville (only soil/gravel with < 50 ppm PCBs).</p> <p>To the best of PGE's knowledge, after reasonable inquiry, those companies/persons with whom PGE currently has arrangements for disposal/recycling/destruction of wastes and/or used material are listed in the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a. The document summarizes the current various waste stream types, the current initial carrier, the current interim storage (if applicable), the current secondary carrier (if applicable), and the current disposal facility. To the best of PGE's knowledge, after reasonable inquiry, all companies/persons with whom PGE has made arrangements for disposal/recycling/destruction of wastes and/or used material for PGE properties in Oregon are listed in the attached document (Q40_Waste-Materials Receivers and Carriers.pdf).</p> <p>The following describes the current waste and used material arrangements at PSC, which would have been similar to the historic waste arrangements at Harborton Substation, Sellwood Substation, and PSC (although it is likely that different contractors/service providers were historically utilized):</p> <ul style="list-style-type: none"> • Earth Protection Services, Inc. (EPSI) recycles the variety of recyclable waste and used materials from the PSC (i.e., ballasts, batteries, and mercury containing articles). New empty containers are exchanged for the filled containers. If there are any concerns about the integrity of the new containers or any other concerns, PGE's Environmental Services (which processes all EPSI invoices) is called to ensure that the vendor promptly corrects the problem. EPSI is a nationally recognized recycling vendor. • Used transformer/insulating oil (< 1 ppm PCBs) is recycled in house by PGE or by Univar USA Inc.. Univar also picks up and transports used transformer/insulating oil (≥ 50 ppm PCBs) to either Clean Harbors Deer Park or to Clean Harbors Aragonite. In addition, Univar picks up and transports used rags and absorbent material (≥ 50 ppm PCBs) to Arlington Landfill. • Used rags and absorbent material (1 to 50 ppm PCBs) is picked up by NRC Environmental Services and transported to Columbia Ridge Landfill. • Used transformer/insulating oil (1 to 50 ppm PCBs) is picked up by Transformer Technologies and is incinerated by Transformer Technologies or recycled at Environmental Management of Kansas City. • Non-PCB containing used oil (e.g., hydraulic fluids, compressor oil, and motor oil), 	<p>Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p> <p>Also see all Question 21 Attachments</p> <p>Also see Question 27 Attachment Q27_Waste-Materials Receivers within IA.pdf</p> <p>Also see all Question 52 Attachments</p>

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	<p>used oil filters, and used antifreeze from the maintenance shop are collected in labeled 55-gallon drums and recycled or used for energy recovery by Thermo Fluids.</p> <ul style="list-style-type: none"> • All parts washers are maintained under license by Safety Kleen which performs monthly service calls. Safety Kleen recycles all used non-hazardous solvents and brake solution, processing the solvent and brake solution for reuse. • Aerosol can drainings are collected in industry standard aerosol can puncturing devices. At PSC, punctured cans are recycled by CalBag Metals Recycling (non-ferrous metal) or Schnitzer Steel (ferrous metal). When the drums are near full, they are sampled by a licensed laboratory to help characterize the waste prior to collection. Other non-PCB-contaminated scrap metal is also recycled by CalBag Metals Recycling (non-ferrous metal) or Schnitzer Steel (ferrous metal). • Hazardous solvents and paint drainings from aerosol cans are picked up by Veolia Environmental Services and incinerated at Veolia Es Technical Solutions. • Non-PCB-contaminated used equipment parts (e.g., gaskets, hoses, and air filters), auto parts (brake pads, belts, and air filters), and general trash are picked up by waste management and transported to various waste management landfills. • Oil-filled obsolete transformers and other electrical equipment (< 50 ppm PCBs) are transported to Transformer Technologies. Oil-filled obsolete transformers and other electrical equipment (≥ 50 ppm PCBs) are sent to either Clean Harbors Deer Park or Clean Harbors Argonite for incineration. Oil-filled ballasts (> 1 ppm PCBs) are sent to Arlington Landfill or Clean Harbors Deer Park. • Drained obsolete equipment (< 50 ppm PCBs) is recycled by Coleman Metals and drained obsolete equipment (50 to 500 ppm PCBs) is disposed of at Arlington Landfill. <p>Soil and gravel removed during excavations (from upgrades, spill response, or remediation) is tested and disposed of appropriately. The soil and gravel are either transported directly from the site to the disposal facility or are transported to Wilsonville (only soil/gravel with < 50 ppm PCBs) and/or PSC for interim storage before bulk disposal at a location dependant upon PCB-content.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the waste and materials disposal, treatment, and recycling documentation attached in response to Question 21. Waste disposal permits are attached in response to Question 52. Also see the response and document attached in response to Question 27. Additional available general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response (historically a PGE waste and material handling facility within the Investigation Area), the supplemental submittal of</p>	

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	documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).	
<p>41. Describe all wastes disposed by Respondent into Respondent's drains including but not limited to:</p> <p>a. the nature and chemical composition of each type of waste;</p> <p>b. the dates on which those wastes were disposed;</p> <p>c. the approximate quantity of those wastes disposed by month and year;</p> <p>d. the location to which these wastes drained (e.g. septic system or storage tank at the Property, pre-treatment plant, Publicly Owned Treatment Works (POTW), etc.); and</p> <p>e. whether and what pretreatment was provided.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, other than the stormwater drainage and oil water separator associated with the stormwater control and secondary spill containment system at the Rivergate North Substation, no drains other are/were present at the Rivergate Substations. To the best of PGE's knowledge, after reasonable inquiry, no wastes are/were disposed of into the stormwater drainage at the Rivergate North Substation. There are/were no waste treatment/pretreatment facilities at the Rivergate Substations other than the oil water separator associated with the stormwater control and secondary spill containment system at the Rivergate North Substation. For further details on site stormwater, see the response to Questions 13i, 18, and 19.</p>	
<p>42. Identify any sewage authority or treatment works to which Respondent's waste was sent.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, there are/were no sewage authority or treatment works to which the Rivergate Substations waste is/was sent.</p>	
<p>43. Describe all settling tank, septic system, or pretreatment system sludges or other treatment wastes resulting from Respondent's operations.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, there are/were no settling tanks, septic systems, or pretreatment system sludges or other treatment wastes resulting from operations at the Rivergate Substations.</p>	
<p>44. If applicable, describe the facilities, processes and methods Respondent or Respondent's contractor used, and activities engaged in, either currently or in the past, related to ship building,</p>	<p>Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE did not engage in ship building, retrofitting, maintenance, or repair activities at the Rivergate Substations.</p>	

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retrofitting, maintenance or repair, including, but not limited to, dry-docking operations, tank cleaning, painting and re-powering.		
45. Describe any hazardous substances, wastes, or materials used or generated by the activities described in response to the previous Question and how these hazardous substances, materials and wastes were released or disposed of.	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE did not engage in ship building, retrofitting, maintenance, or repair activities at the Rivergate Substations.	
46. Provide copies of any records you have in your possession, custody or control relative to the activities described in response to the previous two Questions.	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, PGE did not engage in ship building, retrofitting, maintenance, or repair activities at the Rivergate Substations.	
47. Describe any process or activity conducted on a Property identified in response to Question 4 involving the acquisition, manufacture, use, storage, handling, disposal or release or threatened release of polychlorinated biphenyl(s) ("PCB(s)" or PCB(s)-containing materials or liquids.	<p>In general, PGE replaces PCB-containing or potentially PCB-containing equipment (e.g., transformers, capacitors, lamp ballasts, circuit breakers, bushings, and step regulators) with non-PCB oil containing equipment (< 50 ppm PCBs) as they are removed from service. The primary materials that may have been used for equipment maintenance include dielectric fluids (oil) and transformer oil, which may have historically contained PCBs. To the best of PGE's knowledge, after reasonable inquiry, other than minor repairs, electrical equipment maintenance was generally not performed on site. Instead, equipment was taken out of service and transported to PGE's waste and material handling facility for repairs and retrofitting.</p> <p>See the documents (Q21a_Rivergate North_OilEQ.pdf and Q21a_Rivergate South_OilEQ.pdf) attached in response to Question 21a for the list of oil-filled equipment at the Rivergate Substations. The documents identify the position of the oil-filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs, and the total volume of oil. Several of the oil-filled equipment listed in the document are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978. The documents (Q21a_1980 Oil Filled Equipment.pdf, Q21a_1983 Capacitor Report.pdf, and Q21a_1986 Oil Filled Equipment.pdf) attached in response to Question 21a describe PGE's oil-filled equipment at the Rivergate Substations in 1980, 1983, and 1986. Other oil-filled equipment transportation and disposal documents include:</p>	<p>See Question 15 Attachments Q15_Rivergate_09-14-1999.pdf Q15_Rivergate_01-10-2000.pdf Q15_Rivergate_01-14-2000.pdf Q15_Rivergate_01-19-2000.pdf</p> <p>Also see Question 21 Attachments Q21a_Rivergate North_OilEQ.pdf Q21a_Rivergate South_OilEQ.pdf Q21a_1980 Oil Filled Equipment.pdf Q21a_1983 Capacitor Report.pdf Q21a_1986 Oil Filled Equipment.pdf Q21a_1986-10-09_transport_Rivergate.pdf Q21a_RS 1986-11-12_non-failed transport.pdf Q21a_1987-01-28_transport_Rivergate.pdf Q21a_RN 1989-03-09_transport.pdf Q21a_2001-10-09_transport_Rivergate.pdf Q21a_HazWaste Manifest 1991-01-22.pdf Q21a_1992-08-27_manifest_RIVERGATE.pdf Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf</p>

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	<ul style="list-style-type: none"> The non-leaking capacitor transport documents (Q21a_1986-10-09_transport_Rivergate.pdf, Q21a_RS 1986-11-12_non-failed transport.pdf, Q21a_1987-01-28_transport_Rivergate.pdf, Q21a_RN 1989-03-09_transport.pdf, and Q21a_2001-10-09_transport_Rivergate.pdf) attached in response to Question 21a are the general transport documents for non-leaking capacitors removed from the Rivergate Substations between 1986 and 2001. To the best of PGE's knowledge, after reasonable inquiry and based on the transportation documents, all of these obsolete capacitors were picked up for disposal/recycling by Environmental Systems Company (ENSCO, now Clean Harbors). The document (Q21a_HazWaste Manifest 1991-01-22.pdf) attached in response to Question 21a is the hazardous waste manifest for the disposal of approximately 3700kg of PCB-containing oil, sampling material, glass test vials, and three leaking capacitors from the Rivergate South Substation. This waste was transported by Technical Transport Inc to ENSCO (now Clean Harbors) for disposal/recycling. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information associated with these leaking capacitors. The document (Q21a_1992-08-27_manifest_RIVERGATE.pdf) attached in response to Question 21a is the hazardous waste manifest for the disposal of approximately 530 kg of PCB-contaminated capacitors from the Rivergate Substations. Eleven oil-filled capacitors (oil-filled [liquid] capacitors [solid]) (7 non-leaking capacitors and 4 leaking capacitors) were transported by PGE to General Electric (GE) for disposal/recycling. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information associated with these leaking and non-leaking capacitors <p>The following summarizes the known remediation activities conducted at the Rivergate Substations associated with the releases of PCB-containing oil:</p> <p><u>Rivergate North Substation:</u></p> <ul style="list-style-type: none"> 11 January 1999 – Oil from a capacitor spilled in a high voltage area; see the document (Q62_01-11-99_Rivergate North.pdf) attached in response to Question 62. Due to the high voltage area, sampling/cleanup could not be conducted until a power outage. Initial soil sampling occurred on 24 September 1999. A composite of two samples from the spill area was analyzed for PCBs. The detected concentration for the composite sample was 5,400 ppm PCBs; see the document (Q15_Rivergate_09-14-1999.pdf) attached in response to Question 15. Due to the high voltage area, further sampling/removal could not be conducted until another power outage. <p>In January 2000, follow-up soil characterization sampling was conducted in the general vicinity of the 1999 samples. On 10 January 2000, twenty-two samples were collected and tested; see the document (Q15_Rivergate_01-10-2000.pdf) attached in response to Question 15. Twenty-one of the samples had PCB concentrations ranging from non-detect to 1 ppm. One sample collected from a location adjacent to Capacitor Bank 1</p>	<p>Q21a_RS 1987-05-14_oil soaked gravel transport.pdf Q21a_RS 1986-9-17_failed cap.pdf</p> <p>Also see Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic.pdf</p> <p>Also see all Question 62 Attachments</p>

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	<p>had a detected concentration of 9,200 ppm. An initial cleanup was performed in which soil was removed followed by the collection of 7 confirmation samples from around Capacitor Bank 1; see the document (Q15_Rivergate_01-14-2000.pdf) attached in response to Question 15. Five of the seven confirmation samples had PCB concentrations ranging from 0.27 ppm to 9.3 ppm and two samples had concentrations of 43 ppm and 510 ppm. Additional cleanup was performed with the removal of more soil followed by the collection of two confirmation samples around the two highest PCB locations; see the document (Q15_Rivergate_01-19-2000.pdf) attached in response to Question 15. These two confirmation samples had detected PCB concentrations of less than 3 ppm. From the cleanup of the spill, a total of 23,940 kg of PCB contaminated soil, gravel, and debris was removed from the Rivergate North Substation and disposed of at the Arlington Landfill; see the hazardous waste manifest (Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf) attached in response to Question 21a.</p> <ul style="list-style-type: none"> 8 August, 2005 – Approximately 2 gallons of PCB-containing oil (≥ 50 ppm) from a capacitor was released onto the soil, gravel, and capacitor bank steel structure; see the document (Q62_08-08-2005_Rivergate North.pdf) attached in response to Question 62. Analysis of the oil indicated that it contained 800,000+ ppm PCBs. The spill was cleaned up immediately and the waste (approximately 5 cubic feet of soil, gravel, and concrete, as well as clean-up material) was placed in drums. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 5 cubic feet of PCB- and petroleum hydrocarbon-contaminated soil/gravel/concrete was likely taken to PSC for interim storage where it was comingled with other ≥ 50 ppm PCB-contaminated material before disposal at the Arlington Landfill. <p><u>Rivergate South Substation:</u></p> <ul style="list-style-type: none"> 16 March 1987 – Oil-soaked gravel was excavated from the Rivergate South Substation; see the document (Q21a_RS 1987-05-14_oil soaked gravel transport.pdf) attached in response to Question 21a. To the best of PGE's knowledge, after reasonable inquiry, the gravel was contaminated with PCB-containing petroleum hydrocarbons due to a failed capacitor (part of capacitor bank #5); see the document (Q21a_RS 1986-9-17_failed cap.pdf) attached in response to Question 21a. The excavated gravel was transported to Sellwood Substation (a historical PGE waste and handling facility) for interim storage. It was placed in a drop-box on 16 March 1987 for pickup and disposal by Chem-Securities at a Chem-Securities landfill appropriate for the PCB content of the gravel. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information or analytical data relating to this remediation. 19 June 1989 – Seventy-five gallons of insulating oil were released from a transformer tagged as <1ppm PCB; see the document (Q62_1989-6-19_Rivergate spill.pdf) attached in response to Question 62. The release occurred as the transformer was being reinstalled (it had recently been factory repaired). The transformer was supposed to have been shipped to PGE empty; however, when PGE personnel opened it up to set 	

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.EPA Question	Response	Records/Information Available
	<p>taps and fill with oil, oil spilled out and onto the substation gravel. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the oil-contaminated gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility.</p> <p>For further information on substation spills, see the response and documents attached for Question 62. Also see the documents attached in response to Question 29 and the annual PCB reports (1978-2007) for PGE (all PGE sites combined), which are provided in a supplemental submittal (Supplemental Submittal S3). The 2008 annual PCB report is not included in the supplemental submittal because it has not yet been completed.</p>	
<p>48. For each process or activity identified in response to the previous Question, describe the dates and duration of the activity or process and the quantity and type of PCB(s) or PCB(s) containing materials or liquids.</p>		
<p>a. the manufacturer and serial number of each transformer;</p> <p>b. the quantity of oil in each transformer;</p> <p>c. the concentrations of PCB contained in the transformer oil;</p> <p>d. the time period or periods in which these transformers were sent to the Property;</p>	<p>Equipment was first installed at the Rivergate Substations when the substations were constructed (approximately 1967 through 1972). Since that time, some equipment has been installed, upgraded, and replaced. See the documents (Q21a_Rivergate North_OilEQ.pdf and Q21a_Rivergate South_OilEQ.pdf) attached in response to Question 21a for the list of oil-filled substation equipment currently at the Rivergate Substations. The documents identify the position of the oil-filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, the test date for PCBs, and the total volume of oil. Several pieces of the oil-filled equipment listed in the documents (Q21a_Rivergate North_OilEQ.pdf and Q21a_Rivergate South_OilEQ.pdf) attached in response to Question 21a are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978. Also see the documents (Q21a_1980 Oil Filled Equipment.pdf, Q21a_1983 Capacitor Report.pdf, and Q21a_1986 Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled equipment at the Rivergate Substations in 1980, 1983, and 1986.</p>	<p>See Question 21 Attachments Q21a_Rivergate North_OilEQ.pdf Q21a_Rivergate South_OilEQ.pdf Q21a_1980 Oil Filled Equipment.pdf Q21a_1983 Capacitor Report.pdf Q21a_1986 Oil Filled Equipment.pdf</p>
<p>e. details about how each transformer was handled or stored or otherwise processed;</p>	<p>Equipment is handled by trained qualified personnel. Equipment is energized and in service.</p> <p>Obsolete equipment is drained prior to disposal/recycling, if possible. Drained oil is incinerated or recycled, depending on its PCB content. Obsolete equipment may be transferred to a PGE waste and used materials handling facility for interim storage prior to disposal/recycling. The obsolete equipment is incinerated, landfill disposed, or recycled based on PCB content and structural composition. See the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a.</p>	<p>See Question 21 Attachment Q21a_Waste Stream Summary.pdf</p>

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.EPA Question	Response	Records/Information Available
	<p>Some used, but not obsolete, transformers have been sold to other companies/persons. These are documented in Supplemental Submittal S7 (documentation from facilities that may have received waste and materials from properties within the Investigation Area).</p> <p>For further information, see the response to Questions 21, 27, and 40. Also see the separate 104(e) response for the Harborton Substation, which was also historically a PGE waste and material handling facility and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).</p>	
f. information describing the contractual relationship Respondent had, if any, with owners or users of the respective transformers, including but not limited to, liability for disposal;	Not applicable. Equipment is owned by PGE.	
g. information on any other oil filled electrical equipment at the Property, and;	See the documents (Q21a_Rivergate North_OilEQ.pdf and Q21a_Rivergate South_OilEQ.pdf) attached in response to Question 21a, which list the current oil-filled equipment at the Rivergate Substations. Also see the documents (Q21a_1980 Oil Filled Equipment.pdf, Q21a_1983 Capacitor Report.pdf, and Q21a_1986 Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled equipment at the Rivergate Substations in 1980, 1983, and 1986.	See Question 21 Attachments Q21a_Rivergate North_OilEQ.pdf Q21a_Rivergate South_OilEQ.pdf Q21a_1980 Oil Filled Equipment.pdf Q21a_1983 Capacitor Report.pdf Q21a_1986 Oil Filled Equipment.pdf
h. complete copies of any contracts, invoices, receipts, or other documents related to the transformers or other oil filled electrical equipment to the Property.	To the best of PGE's knowledge, after reasonable inquiry, the available contracts, agreements, or other arrangements for disposal, treatment, or recycling for this specific facility are provided with the waste and materials disposal, treatment, and recycling documentation attached in response to Question 21. Waste disposal permits are attached in response to Question 52. Additional available general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling are provided in the Harborton Substation 104(e) response, the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7), and the supplemental submittal of general PGE contracts, agreements, or other arrangements for disposal, treatment, or recycling (Supplemental Submittal S6).	See all Question 21 Attachments Also see all Question 52 Attachments
49. For each process or activity identified in response to the previous two Questions, identify the location of the process or activity on the Property.	See the documents (Q21a_Rivergate North_OilEQ.pdf and Q21a_Rivergate South_OilEQ.pdf) attached in response to Question 21a which lists the current oil-filled equipment at the Rivergate Substations. The documents identify the position of the oil filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, the test date for PCBs, and the total volume of oil. Also see the documents (Q21a_1980 Oil Filled Equipment.pdf, Q21a_1983 Capacitor Report.pdf, and Q21a_1986 Oil Filled Equipment.pdf) attached in response to Question 21a for the list of oil-filled equipment at the Rivergate Substations in 1980, 1983, and 1986. To the best of PGE's knowledge, after reasonable inquiry, PGE is not aware of any other processes or activities on the property, either currently or historically.	See Question 21 Attachment Q21a_Rivergate North_OilEQ.pdf.pdf Q21a_Rivergate South_OilEQ.pdf Q21a_1980 Oil Filled Equipment.pdf Q21a_1983 Capacitor Report.pdf Q21a_1986 Oil Filled Equipment.pdf Also see all Question 19 Attachments

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.EPA Question	Response	Records/Information Available
	Also see the documents attached in response to Question 19, which include figures that show the location of oil filled equipment.	
Section 5.0 - Regulatory Information		
<p>50. Identify all federal, state and local authorities that regulated the owner or operator of each Property and/or that interacted with the owner or operator of each Property. Your response is to address all interactions and in particular all contacts from agencies/departments that dealt with health and safety issues and/or environmental concerns.</p>	<p>The primary federal, state and local agencies that have regulated PGE at the Rivergate Substations include:</p> <ul style="list-style-type: none"> • City of Portland (including fire, medical, and police): building safety inspections, facility enhancements, building demolitions/constructions, notification of spills • Oregon Department of Environmental Quality (DEQ): spills, product/waste disposal, facility enhancements • U.S. Environmental Protection Agency (USEPA): for Portland Harbor Superfund Site Resource Conservation and Recovery Act (RCRA), and Toxic Substances Control Act (TSCA) <p>Regarding health and safety concerns, interaction with the following agencies would occur as a result of a compliance inspection, a consultation visit or during the course of an accident investigation (contact with the OPUC would occur if an accident of a certain severity occurred at a site):</p> <ul style="list-style-type: none"> • Federal Occupational Safety and Health Administration (OSHA) • Oregon Occupational Safety and Health Administration (OrOSHA) • Oregon Public Utility Commission (OPUC) • Oregon Department of Transportation (ODOT) • Federal Energy Regulatory Commission (FERC) <p>To the best of PGE's knowledge, after reasonable inquiry, other than a memo documenting a traffic count performed by the City of Portland (see the attached Q50_Rivergate 1993 COP Traffic Count.pdf), there are no records indicating correspondence or inspections specific to the Rivergate Substations by these regulatory agencies.</p>	<p>Question 50 Attachments Q50_Rivergate 1993 COP Traffic Count.pdf</p>
<p>51. Describe all occurrences associated with violations, citations, deficiencies. and/or accidents concerning each Property during the period being investigated related to health and safety issues and/or environmental concerns. Provide copies of all documents associated with each occurrence described.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, PGE has not had any environmental related violations/citations/deficiencies for the Rivergate Substations. For spills/discharges, please see the response to Question 62.</p> <p>PGE maintains records of all OSHA accidents and injuries; however, the records are not categorized or searchable by property. To the best of PGE's knowledge, after reasonable inquiry, PGE does not know if any OSHA reportable accidents/injuries have occurred at the Rivergate Substations.</p>	
<p>52. Provide a list of all local, state and federal environmental permits ever</p>	<p>The Rivergate Substations have no known environmental permits.</p>	<p>Question 52 Attachments Q52_01.pdf</p>

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.EPA Question	Response	Records/Information Available
issued to the owner or operator on each Property (e.g., RCRA permits. NPDES permits, etc.). Please provide a copy of each federal and state permit, and the applications for each permit, ever issued to the owner or operator on each Property.	The attached documents (Q52_01.pdf and Q52_02.pdf) are general PGE disposal permits, for which specific contributions from substations are not indicated. A component of the waste disposed under these permits may have originated from the Rivergate Substations.	Q52_02.pdf
53. Did the owner or operator ever file a Hazardous Waste Activity Notification under the RCRA? If so, provide a copy of such notification.	<p>No Hazardous Waste Activity Notification has been filed for the Rivergate Substations, specifically.</p> <p>Hazardous materials from the Rivergate Substations have been disposed of after interim storage at a PGE waste and material handling facility (e.g., the PSC and Sellwood Substation). The EPA ID ORD980665376, listed on the hazardous waste manifests (Q21a_1992-08-27_manifest_RIVERGATE.pdf, Q21a_HazWaste Manifest 1991-01-22.pdf, Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf) attached in response to Question 21a, is for the PSC, a PGE waste and handling facility.</p> <p>Also see the 104(e) response for Harborton Substation, which is within the Investigation Area and was historically a PGE waste and material handling facility, and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).</p>	<p>See Question 21 Attachments</p> <p>Q21a_1992-08-27_manifest_RIVERGATE.pdf</p> <p>Q21a_HazWaste Manifest 1991-01-22.pdf</p> <p>Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf</p>
54. Did the owner or operator's facility on each Property ever have "interim status" under the RCRA? If so, and the facility does not currently have interim status; describe the circumstances under which the facility lost interim status.	Not applicable. No application for "interim status."	
55. Provide all RCRA Identification Numbers issued to Respondent by EPA or a state for Respondent's operations.	<p>To the best of PGE's knowledge, after reasonable inquiry, no RCRA Identification Numbers have been issued for the Rivergate Substations.</p> <p>The EPA ID ORD980665376, listed on the hazardous waste manifests attached in response to Question 21a, is for the PSC, a PGE waste and handling facility used for interim storage of waste prior to disposal/recycling.</p>	<p>See Question 21 Attachments</p> <p>Q21a_1992-08-27_manifest_RIVERGATE.pdf</p> <p>Q21a_HazWaste Manifest 1991-01-22.pdf</p> <p>Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf</p>

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.EPA Question	Response	Records/Information Available
<p>56. Identify all federal offices to which Respondent has sent or filed hazardous substance or hazardous waste information. State the years during which such information was sent/filed.</p>	<p>Information concerning toxic waste/material (PCB-containing material and waste) from Rivergate Substations filed to TSCA in 1991, 1992, and 2000. The EPA ID ORD980665376, listed on the hazardous waste manifests attached in response to Question 21c, is for the PSC, a PGE waste and handling facility used for interim storage of waste prior to disposal/recycling. See the response to Question 53 and the documents (Q21a_1992-08-27_manifest_RIVERGATE.pdf, Q21a_HazWaste Manifest 1991-01-22.pdf, Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf) attached in response to Question 21a.</p> <p>Hazardous materials from the Rivergate Substations, if any, has been disposed of after interim storage at a PGE waste and material handling facility (e.g., the PSC). See the 104(e) response for Harborton Substation, which is within the Investigation Area and was historically a PGE waste and material handling facility, and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).</p>	<p>See Question 21 Attachments Q21a_1992-08-27_manifest_RIVERGATE.pdf Q21a_HazWaste Manifest 1991-01-22.pdf Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf</p>
<p>57. Identify all state offices to which Respondent has sent or filed hazardous substance or hazardous waste information. State the years during which such information was sent/filed.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, no hazardous substance or hazardous waste information has been sent or filed to any state offices for the Rivergate Substations.</p> <p>Hazardous materials from the Rivergate Substations, if any, has been disposed of after interim storage at a PGE waste and material handling facility (e.g., the PSC). See the 104(e) response for Harborton Substation, which is within the Investigation Area and was historically a PGE waste and material handling facility, and the supplemental submittal of documentation from other PGE facilities that may have received waste and materials from the Rivergate Substations (Supplemental Submittal S7).</p>	
<p>58. List all federal and state environmental laws and regulations under which the Respondent has reported to federal or state governments, including but not limited to: Toxic Substances Control Act, 15 U.S.C. Sections 2601 et seq., (TSCA); Emergency Planning and Community Right-to-Know Act, 42 U.S.C. Sections 1101 et seq., (EPCRA); and the Clean Water Act (the Water Pollution Prevention and Control Act), 33 U.S.C. Sections 1251 et seq., Oregon Hazardous Substance Remedial Action Law, ORS 465.315, Oregon Water Quality law, ORS Chapter 468(b), Oregon</p>	<p>The federal and state environmental laws and regulations under which PGE has reported to federal and state governments for waste from the Rivergate Substations include TSCA, Oregon Solid Waste Law, and the state fire code.</p> <p>See the documents attached in response to Question 21 and the documents attached in response to Question 50.</p>	<p>See all Question 21 Attachments</p> <p>Also see all Question 50 Attachments</p>

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Hazardous Waste and Hazardous Materials law, ORS Chapters 465 and 466, or Oregon Solid Waste law, ORS Chapter 459. Provide copies of each report made, or if only oral reporting was required, identify the federal and state offices to which such report was made.		
59. Provide a copy of any registrations, notifications, inspections or reports required by the Toxic Substances Control Act, 15 USC § 2601 et seq., or state law, to be maintained or submitted to any government agency, including fire marshal(s), relating to PCB(s) or PCB(s) containing materials or liquids on any Property identified in response to Question 4.	Annual PCB reports (1978-2007) for PGE (all PGE sites combined) are maintained in compliance with record-reporting rule 40 CFR 761 and are provided in a supplemental submittal (Supplemental Submittal S3). The 2008 annual PCB report is not included in the supplemental submittal because it has not yet been completed.	
60. Has Respondent or Respondent's contractors, lessees, tenants, or agents ever contacted, provided notice to, or made a report to the Oregon Department of State Lands ("DSL") or any other state agency concerning an incident, accident, spill, release, or other event involving Respondent's leased state aquatic lands? If so, describe each incident, accident, spill, release, or other event and provide copies of all communications between Respondent or its agents and DSL or the other state agency and all documents that were exchanged between Respondent, its agents and DSL or other state agency.	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, there were/are no contacts to DSL in regards to an incident, accident, spill, release, or other event involving the Rivergate Substations.	

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.EPA Question	Response	Records/Information Available
61. Describe all notice or reporting requirements to DSL that you had under an aquatic lands lease or slate law or regulation regarding incidents affecting, or activities or operations occurring on leased aquatic lands. Include the nature of the matter required to be reported and the office or official to whom the notice or report went to. Provide copies of all such notices or reports.	Not applicable. To the best of PGE's knowledge, after reasonable inquiry, there were/are no notices or reporting requirements to DSL.	
Section 6.0 - Releases and Remediation		
62. Identify all leaks, spills, or releases into the environment of any waste, including petroleum, hazardous substances, pollutants, or contaminants, that have occurred at or from each Property, which includes any aquatic lands owned or leased by Respondent. In addition, identify and provide copies of any documents regarding: <ul style="list-style-type: none"> a. when such releases occurred; b. how the releases occurred (e.g. when the substances were being stored, delivered by a vendor, transported or transferred (to or from any tanks, drums, barrels, or recovery units), and treated); c. the amount of each hazardous substances, pollutants, or contaminants so released; d. where such releases occurred; e. any and all activities undertaken in response to each such release or threatened release, including the notification of any agencies or governmental units about the release; 	<p>To the best of PGE's knowledge, after reasonable inquiry, the attached documents provide information describing the known leaks, spills, or releases into the environment at the Rivergate Substations. The following summary incorporates all known and available information with respect to specific releases that have occurred at the Rivergate Substations:</p> <p><u>Rivergate North Substation:</u></p> <ul style="list-style-type: none"> • 25 January 1994 - Two quarts of oil were spilled onto gravel, encompassing an area of approximately five square feet; see the attached document (Q62_1994-01-26.pdf). The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 5 square feet of petroleum hydrocarbon-contaminated soil/gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility. • 25 August 1994 – Hydraulic oil was spilled at the Rivergate North Substation, encompassing an area of approximately 2 square feet; see the attached document (Q62_08-25-1994_Cleanup_Maint Request_Rivergate North.pdf). The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 2 square feet of petroleum hydrocarbon-contaminated soil/gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility. • 11 January 1999 – Oil from a capacitor spilled in a high voltage area; see the attached document (Q62_01-11-99_Rivergate North.pdf). Due to the high voltage area, sampling/cleanup could not be conducted until a power outage. Initial soil sampling occurred on 24 September 1999. A composite of two samples from the spill area was 	<p>Question 62 Attachments Q62_1994-01-26.pdf Q62_08-25-1994_Cleanup_Maint Request_Rivergate North.pdf Q62_01-11-99_Rivergate North.pdf Q62_08-08-2005_Rivergate North.pdf Q62_1989-6-19_Rivergate spill.pdf Q62_08-25-1994_Spill Cleanup_Maint Request_RivergateS.pdf</p> <p>Also see Question 15 Attachments Q15_Rivergate_01-10-2000.pdf Q15_Rivergate_01-14-2000.pdf Q15_Rivergate_01-19-2000.pdf</p> <p>Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf Q21a_RS 1987-05-14_oil soaked gravel transport.pdf Q21a_RS 1986-9-17_failed cap.pdf Q21a_HazWaste Manifest 1991-01-22.pdf Q21a_1992-08-27_manifest_RIVERGATE.pdf</p>

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<p>f. any and all investigations of the circumstances, nature, extent or location of each release or threatened release including, the results of any soil, water (ground and surface), or air testing undertaken;</p> <p>g. all persons with information relating to these releases; and</p> <p>h. list all local, state, or federal departments or agencies notified of the release, if applicable;</p>	<p>analyzed for PCBs. The detected concentration for the composite sample was 5,400 ppm PCBs; see the document (Q15_Rivergate_09-14-1999.pdf) attached in response to Question 15. Due to the high voltage area, further sampling/removal could not be conducted until another power outage.</p> <p>In January 2000, follow-up soil characterization sampling was conducted in the general vicinity of the 1999 samples. On 10 January 2000, twenty-two samples were collected and tested; see the document (Q15_Rivergate_01-10-2000.pdf) attached in response to Question 15. Twenty-one of the samples had PCB concentrations ranging from non-detect to 1 ppm. One sample collected from a location adjacent to Capacitor Bank 1 had a detected concentration of 9,200 ppm. An initial cleanup was performed in which soil was removed followed by the collection of 7 confirmation samples from around Capacitor Bank 1; see the document (Q15_Rivergate_01-14-2000.pdf) attached in response to Question 15. Five of the seven confirmation samples had PCB concentrations ranging from 0.27 ppm to 9.3 ppm and two samples had concentrations of 43 ppm and 510 ppm. Additional cleanup was performed with the removal of more soil followed by the collection of two confirmation samples around the two highest PCB locations; see the document (Q15_Rivergate_01-19-2000.pdf) attached in response to Question 15. These two confirmation samples had detected PCB concentrations of less than 3 ppm. From the cleanup of the spill, a total of 23,940 kg of PCB contaminated soil, gravel, and debris was removed from the Rivergate North Substation and disposed of at the Arlington Landfill; see the hazardous waste manifest (Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf) attached in response to Question 21a.</p> <ul style="list-style-type: none"> 8 August, 2005 – Approximately 2 gallons of PCB-containing oil (≥ 50 ppm) from a capacitor was released onto the soil, gravel, and capacitor bank steel structure; see the attached document (Q62_08-08-2005_Rivergate North.pdf). Analysis of the oil indicated that it contained 800,000+ ppm PCBs. The spill was cleaned up immediately and the waste (approximately 5 cubic feet of soil, gravel, and concrete, as well as clean-up material) was placed in drums. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this gravel was likely taken to PSC for interim storage where it was comingled with other ≥ 50 ppm PCB-contaminated material before disposal at the Arlington Landfill. <p><u>Rivergate South Substation:</u></p> <ul style="list-style-type: none"> 16 March 1987 – Oil-soaked gravel was excavated from the Rivergate South Substation; see the document (Q21a_RS 1987-05-14_oil soaked gravel transport.pdf) attached in response to Question 21a. To the best of PGE's knowledge, after reasonable inquiry, the gravel was contaminated with PCB-containing petroleum hydrocarbons due to a failed capacitor (part of capacitor bank #5); see the document (Q21a_RS 1986-9-17_failed cap.pdf) attached in response to Question 21a. The excavated gravel was transported to Sellwood Substation (a historical PGE waste and handling facility) for interim storage. It was placed in a drop-box on 16 March 1987 for pickup and disposal 	

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	<p>by Chem-Securities at a Chem-Securities landfill appropriate for the PCB content of the gravel. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information or analytical data relating to this remediation.</p> <ul style="list-style-type: none"> 19 June 1989 – Seventy-five gallons of insulating oil was released from a transformer tagged as <1ppm PCB; see the attached document (Q62_1989-6-19_Rivergate spill.pdf). The release occurred as the transformer was being reinstalled (it had recently been factory repaired). The transformer was supposed to have been shipped to PGE empty; however, when PGE personnel opened it up to set taps and fill with oil, oil spilled out and onto the substation gravel. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the oil-contaminated gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility. 25 August 1994 – Oil from a transformer radiator spilled onto the concrete and adjacent gravel surface, encompassing an area of approximately 2 ft by 8 ft; see the attached document (Q62_08-25-1994_Spill Cleanup_Maint Request_RivergateS.pdf) attached. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil.). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 16 square feet of oil-contaminated soil/gravel was disposed of at the appropriate landfill based on PCB-content after interim storage at a PGE waste and material handling facility. <p>Oil-filled equipment transportation and disposal documents for leaking capacitors include:</p> <ul style="list-style-type: none"> The document (Q21a_HazWaste Manifest 1991-01-22.pdf) attached in response to Question 21a is the hazardous waste manifest for the disposal of approximately 3700kg of PCB-containing oil, sampling material, glass test vials, and three leaking capacitors from the Rivergate South Substation. This waste was transported by Technical Transport Inc to ENSCO (now Clean Harbors) for disposal/recycling. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information associated with these leaking capacitors. The document (Q21a_1992-08-27_manifest_RIVERGATE.pdf) attached in response to Question 21a is the hazardous waste manifest for the disposal of approximately 530 kg of PCB-contaminated capacitors from the Rivergate Substations. Eleven oil-filled capacitors (7 non-leaking and 4 leaking) were transported by PGE to GE for disposal/recycling. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information associated with these capacitors. 	

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.EPA Question	Response	Records/Information Available
<p>63. Was there ever a spill, leak, release or discharge of waste, including petroleum, or hazardous substances, pollutant or contaminant into any subsurface disposal system or floor drain inside or under a building on the Property? If the answer to the preceding question is anything but an unqualified "no", identify:</p> <p>a. where the disposal system or floor drains were located;</p> <p>b. when the disposal system or floor drains were installed;</p> <p>c. whether the disposal system or floor drains were connected to pipes;</p> <p>d. where such pipes were located and emptied;</p> <p>e. when such pipes were installed;</p> <p>f. how and when such pipes were replaced or repaired; and</p> <p>g. whether such pipes ever leaked or in any way released such waste or hazardous substances into the environment.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, PGE has no knowledge of waste disposal or of any spills, leaks, releases, or discharges of waste into subsurface disposal system or floor drains at the Rivergate Substations.</p>	
<p>64. Has any contaminated soil ever been excavated or removed from the Property? Unless the answer to the preceding question is anything besides an unequivocal "no", identify and provide copies of any documents regarding:</p>		
<p>a. amount of soil excavated;</p>	<p>The following summarizes the known amount of soil excavated at the Rivergate Substations:</p> <p><u>Rivergate North Substation:</u></p> <ul style="list-style-type: none"> 25 January 1994 – Two quarts of oil were spilled onto gravel, encompassing an area of approximately five square feet; see the document (Q62_1994-01-26.pdf) attached in 	<p>See Question 15 Attachments</p> <p>Q15_Rivergate_09-14-1999.pdf</p> <p>Q15_Rivergate_01-10-2000.pdf</p> <p>Q15_Rivergate_01-14-2000.pdf</p> <p>Q15_Rivergate_01-19-2000.pdf</p>

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.EPA Question	Response	Records/Information Available
	<p>response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the attached document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 5 square feet of petroleum hydrocarbon-contaminated soil/gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility.</p> <ul style="list-style-type: none"> 25 August 1994 – Hydraulic oil was spilled at the Rivergate North Substation, encompassing an area of approximately 2 square feet; see the document (Q62_08-25-1994_Cleanup_Maint Request_Rivergate North.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 2 square feet of petroleum hydrocarbon-contaminated soil/gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility. 11 January 1999 – Oil from a capacitor spilled in a high voltage area; see the document (Q62_01-11-99_Rivergate North.pdf) attached in response to Question 62. Due to the high voltage area, sampling/cleanup could not be conducted until a power outage. Initial soil sampling occurred on 24 September 1999. A composite of two samples from the spill area was analyzed for PCBs. The detected concentration for the composite sample was 5,400 ppm PCBs; see the document (Q15_Rivergate_09-14-1999.pdf) attached in response to Question 15. Due to the high voltage area, further sampling/removal could not be conducted until another power outage. <p>In January 2000, follow-up soil characterization sampling was conducted in the general vicinity of the 1999 samples. On 10 January 2000, twenty-two samples were collected and tested; see the document (Q15_Rivergate_01-10-2000.pdf) attached in response to Question 15. Twenty-one of the samples had PCB concentrations ranging from non-detect to 1 ppm. One sample collected from a location adjacent to Capacitor Bank 1 had a detected concentration of 9,200 ppm. An initial cleanup was performed in which soil was removed followed by the collection of 7 confirmation samples from around Capacitor Bank 1; see the document (Q15_Rivergate_01-14-2000.pdf) attached in response to Question 15. Five of the seven confirmation samples had PCB concentrations ranging from 0.27 ppm to 9.3 ppm and two samples had concentrations of 43 ppm and 510 ppm. Additional cleanup was performed with the removal of more soil followed by the collection of two confirmation samples around the two highest PCB locations; see the document (Q15_Rivergate_01-19-2000.pdf) attached in response to Question 15. These two confirmation samples had detected PCB concentrations of less than 3 ppm. From the cleanup of the spill, a total of 23,940 kg of PCB contaminated soil, gravel, and debris was removed from the Rivergate North Substation and disposed of at the Arlington Landfill; see the hazardous waste manifest (Q21a_Rivergate</p>	<p>Q15_Rivergate_10-20-2005.pdf</p> <p>Also see all Question 21 Attachments</p> <p>Also see all Question 52 Attachments</p> <p>Also see all Question 62 Attachments</p>

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.EPA Question	Response	Records/Information Available
	<p>North_Haz Mat. Manifest_01-2000.pdf) attached in response to Question 21a.</p> <ul style="list-style-type: none"> 8 August, 2005 – Approximately 2 gallons of PCB-containing (≥ 50 ppm) oil from a capacitor was released onto the soil, gravel, and capacitor bank steel structure; see the document (Q62_08-08-2005_Rivergate North.pdf) attached in response to Question 62. Analysis of the oil indicated that it contained 800,000+ ppm PCBs. The spill was cleaned up immediately and the waste (approximately 5 cubic feet of soil, gravel, and concrete, as well as clean-up material) was placed in drums. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 5 cubic feet of PCB- and petroleum hydrocarbon-contaminated soil/gravel/concrete was likely taken to PSC for interim storage where it was comingled with other ≥ 50 ppm PCB-contaminated material before disposal at the Arlington Landfill. 20 October 2005 – Gravel sampling was conducted on the stained surface of the street in front of (outside of) the Rivergate North Substation. A gravel sample was tested for petroleum hydrocarbons, select solvents, and PCBs; see the document (Q15_Rivergate_10-20-2005.pdf) attached in response to Question 15. Although petroleum hydrocarbons were detected, PCBs and the selected solvents were non-detect. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this petroleum hydrocarbon-contaminated gravel was likely disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. <p><u>Rivergate South Substation:</u></p> <ul style="list-style-type: none"> 16 March 1987 – Oil-soaked gravel was excavated from the Rivergate South Substation; see the document (Q21a_RS 1987-05-14_oil soaked gravel transport.pdf) attached in response to Question 21a. To the best of PGE's knowledge, after reasonable inquiry, the gravel was contaminated with PCB-containing petroleum hydrocarbons due to a failed capacitor (part of capacitor bank #5); see the attached document (Q21a_RS 1986-9-17_failed cap.pdf). The excavated gravel was transported to Sellwood Substation (a historical PGE waste and handling facility) for interim storage. It was placed in a drop-box on 16 March 1987 for pickup and disposal by Chem-Securities at a Chem-Securities landfill appropriate for the PCB content of the gravel. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information or analytical data relating to this remediation. 19 June 1989 – Seventy-five gallons of insulating oil were released from a transformer tagged as <1ppm PCB; see the document (Q62_1989-6-19_Rivergate spill.pdf) attached in response to Question 62. The release occurred as the transformer was being reinstalled (it had recently been factory repaired). The transformer was supposed to have been shipped to PGE empty; however, when PGE personnel opened it up to set 	

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.EPA Question	Response	Records/Information Available
	<p>taps and fill with oil, oil spilled out and onto the substation gravel. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the oil-contaminated gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility.</p> <ul style="list-style-type: none"> 25 August 1994 – Oil from a transformer radiator spilled onto the concrete and adjacent gravel surface, encompassing an area of approximately 2 ft by 8 ft; see the document (Q62_08-25-1994_Spill Cleanup_Maint Request_RivergateS.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 16 square feet of oil-contaminated soil/gravel was disposed of at the appropriate landfill based on PCB-content after interim storage at a PGE waste and material handling facility. <p>See the response and documents attached for Questions 15, 21, and 62.</p>	
b. location of excavation presented on a map or aerial photograph;	<p>To the best of PGE's knowledge, after reasonable inquiry, the only documentation that shows the location of excavated soil is for the soil tested and removed in response to the spill on 11 January 1999; see the documents (Q15_Rivergate_01-10-2000.pdf, Q15_Rivergate_01-14-2000.pdf, and Q15_Rivergate_01-19-2000.pdf) attached in response to Question 15.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, there are no maps, photographs, or figures that depict the locations of the other contaminated soil and/ gravel removed from the substations, which are discussed in Question 64a above.</p>	<p>See Question 15 Attachments Q15_Rivergate_01-10-2000.pdf Q15_Rivergate_01-14-2000.pdf Q15_Rivergate_01-19-2000.pdf</p>
c. manner and place of disposal and/or storage of excavated soil;	<p>Soil and gavel have been disposed of, as needed, in conjunction with various improvements/maintenance activities at the Site, as well as in response to equipment spills. Soils are tested, as needed, and disposed properly. To the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate disposal documentation for contaminated soil removal other than those described in response to Question 64a and attached for Questions 21, 52, and 62.</p> <p>Also see the annual PCB reports for PGE (all PGE sites combined) provided in a supplemental submittal.</p>	<p>See all Question 21 Attachments Also see all Question 52 Attachments Also see all Question 62 Attachment</p>
d. dates of soil excavation;	See the response to Question 64a.	

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e. identity of persons who excavated or removed the soil, if other than a contractor for Respondent;	To the best of PGE's knowledge, after reasonable inquiry, soil and gravel removals were performed by personnel from PGE's EM&C construction department. The PGE EM&C construction department foremen include Dan Loftin and Tim Danchok; other PGE EM&C personnel have changed over time.	
f. reason for soil excavation;	Soil excavation at the Rivergate Substations has occurred from construction activities and in response to equipment spills.	
g. whether the excavation or removed soil contained hazardous substances, pollutants or contaminants, including petroleum, what constituents the soil contained, and why the soil contained such constituents;	See the response to Questions 64a and 64c, which include the available information on type constituents contaminating the soil/gravel and why the soil/gravel contained those constituents.	
h. all analyses or tests and results of analyses of the soil that was removed from the Property;	<p>Soil has been disposed of, as needed, in conjunction with various improvements/maintenance activities at the Rivergate Substation, as well as in response to equipment spills. The available analytical results from soil/gravel testing at the Rivergate Substations are attached in response to Question 15.</p> <p>To the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate results of analysis of any removed soil other than those attached in response to Question 15.</p>	See all Question 15 Attachments
i. all analyses or tests and results of analyses of the excavated area after the soil was removed from the Property; and	In general, spills are cleaned up to remove all visible contamination plus 1 foot laterally. Soil confirmation sampling occurred in January and April 2000, which were associated with the cleanup of the January 1999 spill at the Rivergate North Substation. For further details see the response to Questions 15.	
j. all persons, including contractors, with information about (a) through (i) of this request.	Multiple individuals have had authority within PGE to access and conduct activities on the Rivergate Substations. These are listed on documents attached in response to Question 6g. Also see the documents attached in response to Question 38, for PGE personnel responsible for environmental matters from 1980 – present. Some soil removals were performed by personnel from PGE's EM&C construction department. The PGE EM&C construction department foremen include Dan Loftin and Tim Danchok; other PGE EM&C personnel have changed over time.	<p>See Question 6 Attachments</p> <p>Q06g_Bullseye articles.pdf</p> <p>Q06g_Organizational Charts.pdf</p> <p>Q06g_Distribution and System Planning Information.pdf</p> <p>Q06g_HRIC Structure Report 2008.pdf</p> <p>Q06g_HRIS Structure Info 1982-2007.pdf</p> <p>Also see all Question 38 Attachments</p>
65. Have you ever tested the groundwater under your Property? If so, please provide copies of all data, analysis, and reports generated from such testing.	To the best of PGE's knowledge, after reasonable inquiry, groundwater under the Rivergate Substations has not been tested.	

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<p>66. Have you treated, pumped, or taken any kind of response action on groundwater under your Property? Unless the answer to the preceding question is anything besides an unequivocal "no", identify:</p> <p>a. reason for groundwater action;</p> <p>b. whether the groundwater contained hazardous substances, pollutants or contaminants, including petroleum, what constituents the groundwater contained, and why the groundwater contained such constituents;</p> <p>c. all analyses or tests and results of analyses of the groundwater;</p> <p>d. if the groundwater action has been completed, describe the basis for ending the groundwater action; and</p> <p>e. all persons, including contractors, with information about (a) through (c) of this request.</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the only treatment, pumping, or action relating to groundwater under the Rivergate Substations:</p> <p><u>Rivergate North Substation</u> The hand-drawn sketch (Q13g_Rivergate North_Drain Line.pdf), attached in response to question 13g, indicates that a 1¼" drain line from a sump pump in the basement of the Rivergate North Substation control house conveys any groundwater that may accumulate in the basement's sump out to the west to a 32" X 28" sump just off Time Oil Road. Flow from the sump would be to adjacent wetlands on the north side of the switchyard. To the best of PGE's knowledge, after reasonable inquiry, it is not known when the drain line and sump pump were installed at the Rivergate North Substation control house.</p> <p><u>Rivergate South Substation</u> To the best of PGE's knowledge, after reasonable inquiry, PGE has not treated, pumped, or taken any kind of response action on groundwater under the Rivergate South Substation.</p>	<p>See Question 13 Attachment Q13g_Rivergate North_Drain Line.pdf</p>
<p>67. Was there ever a spill, leak, release or discharge of a hazardous substance, waste, or material into the Willamette River from any equipment, structure, or activity occurring on, over, or adjacent to the river? If the answer to the preceding question is anything but an unqualified "no", identify:</p> <p>a. the nature of the hazardous substance, waste, or material spilled, leaked, released or discharged;</p> <p>b. the dates of each such occurrence;</p> <p>c. the amount and location of such release;</p>	<p>To the best of PGE's knowledge, after reasonable inquiry, no. The Rivergate Substations are not on, over, or directly adjacent to the Willamette River and there are no over-water structures. To the best of PGE's knowledge, after reasonable inquiry, there has never been a spill, leak, release, or discharge of a hazardous substance, waste, or material into the Willamette River from any equipment, structure, or activity occurring on, over, or adjacent to the river at the Rivergate Substations.</p>	

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<p>d. were sheens on the river created by the release;</p> <p>e. was there ever a need to remove or dredge any solid waste, bulk product, or other material from the river as a result of the release? If so, please provide information and description of when such removal/dredging occurred, why, and where the removed/dredged materials were disposed.</p>		
<p>68. For any releases or threatened releases of PCB(s), identify the date, quantity, location and type of PCB(s) or PCB(s) containing materials or liquids, and the nature of any response to or cleanup of the release.</p>	<p>In general, PGE replaces PCB-containing or potentially PCB-containing equipment (e.g., transformers, capacitors, lamp ballasts, circuit breakers, bushings, and step regulators) with non-PCB oil containing equipment (< 50 ppm PCBs) as they are removed from service. The primary materials that may have been used for equipment maintenance include dielectric fluids (oil) and transformer oil, which may have historically contained PCBs. To the best of PGE's knowledge, after reasonable inquiry, other than minor repairs, electrical equipment maintenance was generally not performed on site. Instead, equipment was taken out of service and transported to PGE's waste and material handling facility for repairs and retrofitting.</p> <p>See the documents (Q21a_Rivergate North_OilEQ.pdf and Q21a_Rivergate South_OilEQ.pdf) attached in response to Question 21a for the list of oil-filled equipment at the Rivergate Substations. The documents identify the position of the oil-filled equipment, the serial number of the equipment, the year manufactured, the detected PCB concentrations, and the date tested for PCBs, and the total volume of oil. Several of the oil-filled equipment listed in the document are assumed to contain less than 1 ppm PCBs because they were manufactured after 1978. The documents (Q21a_1980 Oil Filled Equipment.pdf, Q21a_1983 Capacitor Report.pdf, and Q21a_1986 Oil Filled Equipment.pdf) attached in response to Question 21a describe PGE's oil-filled equipment at the Rivergate Substations in 1980, 1983, and 1986. Other oil-filled equipment transportation and disposal documents include:</p> <ul style="list-style-type: none"> The documents (Q21a_1986-10-09_transport_Rivergate.pdf, Q21a_RS 1986-11-12_non-failed transport.pdf, Q21a_1987-01-28_transport_Rivergate.pdf, Q21a_RN 1989-03-09_transport.pdf, and Q21a_2001-10-09_transport_Rivergate.pdf) attached in response to Question 21a are the general transport documents for non-leaking capacitors (oil-filled capacitors) removed from the Rivergate Substations between 1986 and 2001. To the best of PGE's knowledge, after reasonable inquiry and based on the transportation documents, all of these obsolete capacitors were picked up for disposal/recycling by Environmental Systems Company (ENSCO, now Clean Harbors). The document (Q21a_HazWaste Manifest 1991-01-22.pdf) attached in response to 	<p>See Question 15 Attachments Q15_Rivergate_09-14-1999.pdf Q15_Rivergate_01-10-2000.pdf Q15_Rivergate_01-14-2000.pdf Q15_Rivergate_01-19-2000.pdf</p> <p>Also see Question 21 Attachments Q21a_Rivergate North_OilEQ.pdf Q21a_Rivergate South_OilEQ.pdf Q21a_1980 Oil Filled Equipment.pdf Q21a_1983 Capacitor Report.pdf Q21a_1986 Oil Filled Equipment.pdf Q21a_1986-10-09_transport_Rivergate.pdf Q21a_RS 1986-11-12_non-failed transport.pdf Q21a_1987-01-28_transport_Rivergate.pdf Q21a_RN 1989-03-09_transport.pdf Q21a_2001-10-09_transport_Rivergate.pdf Q21a_HazWaste Manifest 1991-01-22.pdf Q21a_1992-08-27_manifest_RIVERGATE.pdf Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf Q21a_RS 1987-05-14_oil soaked gravel transport.pdf Q21a_RS 1986-9-17_failed cap.pdf</p> <p>Also see Question 29 Attachments Q29_Substation Lifecycle.pdf Q29_Operations-Waste Schematic.pdf</p> <p>Also see Question 62 Attachments Q62_01-11-99_Rivergate North.pdf</p>

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	<p>Question 21a is the hazardous waste manifest for the disposal of approximately 3700kg of PCB-containing oil, sampling material, glass test vials, and three leaking capacitors (oil-filled capacitors) from the Rivergate South Substation. This waste was transported by Technical Transport Inc to ENSCO (now Clean Harbors) for disposal/recycling. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information associated with these leaking capacitors.</p> <ul style="list-style-type: none"> The document (Q21a_1992-08-27_manifest_RIVERGATE.pdf) attached in response to Question 21a is the hazardous waste manifest for the disposal of approximately 530 kg of PCB-contaminated capacitors from the Rivergate Substations. Eleven oil-filled capacitors (7 non-leaking and 4 leaking capacitors) were transported by PGE to General Electric (GE) for disposal/recycling. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information associated with these leaking and non-leaking capacitors. <p>The following summarizes the known remediation activities conducted at the Rivergate Substations associated with the known releases of PCB-containing oil:</p> <p><u>Rivergate North Substation:</u></p> <ul style="list-style-type: none"> 11 January 1999 – Oil from a capacitor spilled in a high voltage area; see the document (Q62_01-11-99_Rivergate North.pdf) attached in response to Question 62. Due to the high voltage area, sampling/cleanup could not be conducted until a power outage. Initial soil sampling occurred on 24 September 1999. A composite of two samples from the spill area was analyzed for PCBs. The detected concentration for the composite sample was 5,400 ppm PCBs; see the document (Q15_Rivergate_09-14-1999.pdf) attached in response to Question 15. Due to the high voltage area, further sampling/removal could not be conducted until another power outage. In January 2000, follow-up soil characterization sampling was conducted in the general vicinity of the 1999 samples. On 10 January 2000, twenty-two samples were collected and tested; see the document (Q15_Rivergate_01-10-2000.pdf) attached in response to Question 15. Twenty-one of the samples had PCB concentrations ranging from non-detect to 1 ppm. One sample collected from a location adjacent to Capacitor Bank 1 had a detected concentration of 9,200 ppm. An initial cleanup was performed in which soil was removed followed by the collection of 7 confirmation samples from around Capacitor Bank 1; see the document (Q15_Rivergate_01-14-2000.pdf) attached in response to Question 15. Five of the seven confirmation samples had PCB concentrations ranging from 0.27 ppm to 9.3 ppm and two samples had concentrations of 43 ppm and 510 ppm. Additional cleanup was performed with the removal of more soil followed by the collection of two confirmation samples around the two highest PCB locations; see the document (Q15_Rivergate_01-19-2000.pdf) attached in response to Question 15. These two confirmation samples had detected PCB concentrations of less than 3 ppm. From the cleanup of the spill, a total of 23,940 kg of PCB contaminated soil, gravel, and debris was removed from the Rivergate North Substation and disposed 	<p>Q62_08-08-2005_Rivergate North.pdf Q62_08-08-2005_Rivergate North.pdf Q62_1989-6-19_Rivergate spill.pdf</p>

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	<p>of at the Arlington Landfill; see the hazardous waste manifest (Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf) attached in response to Question 21a.</p> <ul style="list-style-type: none"> 8 August, 2005 – Approximately 2 gallons of PCB-containing oil (≥ 50 ppm) from a capacitor was released onto the soil, gravel, and capacitor bank steel structure; see the document (Q62_08-08-2005_Rivergate North.pdf) attached in response to Question 62. Analysis of the oil indicated that it contained 800,000+ ppm PCBs. The spill was cleaned up immediately and the approximately 5 cubic feet of soil, gravel, and concrete, as well as clean-up material, was placed in drums for disposal. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this gravel was likely taken to PSC for interim storage where it was comingled with other ≥ 50 ppm PCB-contaminated material before disposal at the Arlington Landfill. <p><u>Rivergate South Substation:</u></p> <ul style="list-style-type: none"> 16 March 1987 – Oil-soaked gravel was excavated from the Rivergate South Substation; see the document (Q21a_RS 1987-05-14_oil soaked gravel transport.pdf) attached in response to Question 21a. To the best of PGE's knowledge, after reasonable inquiry, the gravel was contaminated with PCB-containing petroleum hydrocarbons due to a failed capacitor (part of capacitor bank #5); see the document (Q21a_RS 1986-9-17_failed cap.pdf) attached in response to Question 21a. The excavated gravel was transported to Sellwood Substation (a historical PGE waste and handling facility) for interim storage. It was placed in a drop-box on 16 March 1987 for pickup and disposal by Chem-Securities at a Chem-Securities landfill appropriate for the PCB content of the gravel. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information or analytical data relating to this remediation. 19 June 1989 – Seventy-five gallons of insulating oil was released from a transformer tagged as <1ppm PCB; see the document (Q62_1989-6-19_Rivergate spill.pdf) attached in response to Question 62. The release occurred as the transformer was being reinstalled (it had recently been factory repaired). The transformer was supposed to have been shipped to PGE empty; however, when PGE personnel opened it up to set taps and fill with oil, oil spilled out and onto the substation gravel. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the oil-contaminated gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility. <p>See the responses to Questions 15, 21, 47, and 62. Also see the annual PCB reports (1978-2007) for PGE (all PGE sites combined), which are provided in a supplemental submittal (Supplemental Submittal S3).</p>	

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69. For any releases or threatened releases of PCB(s) and/or PCB(s) containing materials or liquids, identify and provide copies of any documents regarding the quantity and type of waste generated as a result of the release or threatened release, the disposition of the waste, provide any reports or records relating to the release or threatened release, the response or cleanup and any records relating to any enforcement proceeding relating to the release or threatened release. Provide all documentation regarding, but not limited to, the following releases:	See the responses to Questions 62 and 68.	
a. a May 20, 1988 release of 20 gallons of 400 parts per million PCB transformer oil; b. a February 9, 1995 release of 5 gallons of oil that spilled from a bushing on the ground; c. a February 24, 1997 release of 20 gallons of 19 parts per million PCB transformer oil onto the ground, and; d. a July 25, 1997 release of 3 gallons of less than 5 parts per million PCB oil from a break on the ground, and; e. a December 4, 1997 release of 40 gallons of cable oil onto the ground following vandalism at the Harborton substation.	Not applicable. Questions 69a through 69e are not relevant to the Rivergate Substations. Information regarding these investigations is provided in the 104(e) response for the Harborton Substation.	
Section 7.0 - Property Investigations		

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<p>70. Provide information and documentation concerning all inspections, evaluations, safety audits, correspondence and any other documents associated with the conditions, practices, and/or procedures at the Property concerning insurance issues or insurance coverage matters.</p>	<p>A loss prevention inspection was conducted by Arkwright Mutual Insurance for the Rivergate North Substation in 1990. See the attached loss prevention report (Q70_Rivergate Sub Inspection 1990.pdf).</p> <p>The attached documents relate to general fire, flood, wind and, earthquake inspections. An engineer from PGE's office of Facilities Management (FM) conducts several inspections a year at most PGE locations. The engineer will do a complete walk through each facility looking for fire hazards and will issue a recommendation when a problem is found. Along with these inspections, the fire protection systems and equipment are checked and usually functionally tested. There are locations that are inspected by FM which do not require the issuing of an inspection report. These locations are small substations where there are only pressure vessels located on the system circuit breakers. This inspection is required by the State of Oregon. Following the inspection, the inspector will send his report to the State so they can keep up to date on the condition of PGE pressure vessels.</p> <p>Copies of PGE's relevant general liability insurance policies are provided in a supplemental submittal (Supplemental Submittal S4).</p>	<p>Question 70 Attachments Q70_FM Global Substation Review.pdf Q70_Rivergate Sub Inspection 1990.pdf</p>
<p>71. Describe the purpose for, the date of initiation and completion, and the results of any investigations of soil, water (ground or surface), sediment, geology, and hydrology or air quality on or about each Property. Provide copies of all data, reports, and other documents that were generated by you or a consultant, or a federal or state regulatory agency related to the investigations that are described.</p>	<p>Soil samples have been analyzed in conjunction with various construction projects and spills at the Rivergate Substations. Available information about these samples is summarized below and results are provided in the attached files. To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the known soil sampling at the Rivergate Substations.</p> <p><u>Rivergate North Substation:</u></p> <ul style="list-style-type: none"> 11 January 1999 - A spill occurred in a high voltage area; see the document (Q62_01-11-99_Rivergate North.pdf) attached in response to Question 62. Due to the high voltage area, sampling/cleanup could not be conducted until a power outage. Initial soil sampling occurred on 24 September 1999. A composite of two samples from the spill area was analyzed for PCBs. The detected concentration for the composite sample was 5,400 ppm PCBs; see the document (Q15_Rivergate_09-14-1999.pdf) attached in response to Question 15. Due to the high voltage area, further sampling/removal could not be conducted until another power outage. <p>In January 2000, follow-up soil characterization sampling was conducted in the general vicinity of the 1999 samples. On 10 January 2000, twenty-two samples were collected and tested; see the document (Q15_Rivergate_01-10-2000.pdf) attached in response to Question 15. Twenty-one of the samples had PCB concentrations ranging from non-detect to 1 ppm. One sample collected from a location adjacent to Capacitor Bank 1 had a detected concentration of 9,200 ppm. An initial cleanup was performed in which</p>	<p>See all Question 15 Attachments</p> <p>Also see Question 19 Attachments Q19_Rivergate North_SPCC Plan.pdf Q19_Rivergate South_SPCC Plan.pdf</p> <p>Also see Question 21 Attachments Q21a_Waste Stream Summary.pdf Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf</p> <p>Also see all Question 52 Attachments</p> <p>Also see all Question 62 Attachments</p>

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	<p>of 43 ppm and 510 ppm. Additional cleanup was performed with the removal of more soil followed by the collection of two confirmation samples around the two highest PCB locations; see the document (Q15_Rivergate_01-19-2000.pdf) attached in response to Question 15. These two confirmation samples had detected PCB concentrations of less than 3 ppm. From the two phases of this spill cleanup, a total of 23,940 kg of PCB contaminated soil, gravel, and debris was removed from the Rivergate North Substation and taken to the Arlington Landfill; see the hazardous waste manifest (Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf) attached in response to Question 21a.</p> <ul style="list-style-type: none"> 2 October 2003 – Soil sampling was conducted following construction activities at the Rivergate North Substation. Sixteen soil samples were analyzed for PCBs. The results were all non-detect; see the document (Q15_Rivergate_10-02-2003.pdf) attached in response to Question 15. To the best of PGE's knowledge, after reasonable inquiry, PGE was unable to locate disposal documentation for this soil; however, based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this soil, if disposed of, would have been disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. 20 October 2005 – Gravel sampling was conducted on the stained surface of the street in front of (outside of) the Rivergate North Substation. A gravel sample was tested for petroleum hydrocarbons, select solvents, and PCBs; see the document (Q15_Rivergate_10-20-2005.pdf) attached in response to Question 15. Although petroleum hydrocarbons were detected, PCBs and the selected solvents were non-detect. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this petroleum hydrocarbon-contaminated gravel was likely disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. <p><u>Rivergate South Substation:</u></p> <ul style="list-style-type: none"> 14 June 2004 – As a result of substation failure and the removal of a buried cable, soil was excavated at the Rivergate South Substation. Nine samples from the excavated soil were tested for PCBs and petroleum hydrocarbons. The results of the soil testing were non-detect for both PCBs and petroleum hydrocarbons; see the document (Q15_Rivergate_06-14-2004.pdf) attached in response to Question 15. The majority of the soil was left on site. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, any soil not left on site would have likely been disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. 	

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	<ul style="list-style-type: none"> 19 April 2006 – Soil sampling was conducted following construction activities at the Rivergate South Substation. Three soil samples were analyzed for PCBs and petroleum hydrocarbons. The results were all non-detect; see the document (Q15_Rivergate_04-19-2006.pdf) attached in response to Question 15. To the best of PGE’s knowledge, after reasonable inquiry, PGE was unable to locate disposal documentation for soil excavated during construction activities; however, based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this soil, if disposed of, would have been disposed of at the Hillsboro Landfill under one of PGE’s general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. <p>For information regarding the disposal of wastes and materials, see the response to Question 21. Also see the spill reports attached in response to Question 62.</p> <p>The SPCC Plans (Q19_Rivergate North_SPCC Plan.pdf and Q19_Rivergate South_SPCC Plan.pdf), attached in response to Question 19, briefly discuss topography and soil condition at the Rivergate Substations.</p> <p>To the best of PGE’s knowledge, after reasonable inquiry, the attached documents include all the reports, information, and data PGE was able to locate for the Rivergate Substations related to soil, water (ground and surface), or air quality and geology/hydrogeology.</p>	
a. a May 20, 1988 release of 20 gallons of 400 parts per million PCB transformer oil;	<p>Not applicable. Questions 71a through 71e are not relevant to the Rivergate Substations. Information regarding these investigations is provided in the response for the Harborton Substation.</p>	
b. a February 9, 1995 release of 5 gallons of oil that spilled from a bushing on the ground;		
c. a February 24, 1997 release of 20 gallons of 19 parts per million PCB transformer oil onto the ground, and;		
d. a July 25, 1997 release of 3 gallons of less than 5 parts per million PCB oil from a break on the ground, and;		
e. a December 4, 1997 release of 40 gallons of cable oil onto the ground following vandalism at the Harborton substation.		

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<p>72. Describe any remediation or response actions you or your agents or consultants have ever taken on each Property either voluntarily or as required by any state or federal agency. If not otherwise already provided under this Information Request, provide copies of all investigations, risk assessments or risk evaluations, feasibility studies, alternatives analysis, implementation plans, decision documents, monitoring plans, maintenance plans, completion reports, or other document concerning remediation or response actions taken on each Property.</p>	<p>To the best of PGE’s knowledge, after reasonable inquiry, the following presents a summary of known remedial activities at the site:</p> <p><u>Rivergate North Substation</u></p> <ul style="list-style-type: none"> • 25 January 1994 - Two quarts of oil were spilled onto gravel (solid), encompassing an area of approximately five square feet; see the document (Q62_1994-01-26.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE’s knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 5 square feet of petroleum hydrocarbon-contaminated soil/gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility. • 25 August 1994 – Hydraulic oil was spilled at the Rivergate North Substation, encompassing an area of approximately 2 square feet; see the document (Q62_08-25-1994_Cleanup_Maint Request_Rivergate North.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE’s knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 2 square feet of petroleum hydrocarbon-contaminated soil/gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility. • 11 January 1999 – Oil from a capacitor spilled in a high voltage area; see the document (Q62_01-11-99_Rivergate North.pdf) attached in response to Question 62. Due to the high voltage area, sampling/cleanup could not be conducted until a power outage. Initial soil sampling occurred on 24 September 1999. A composite of two samples from the spill area was analyzed for PCBs. The detected concentration for the composite sample was 5,400 ppm PCBs; see the document (Q15_Rivergate_09-14-1999.pdf) attached in response to Question 15. Due to the high voltage area, further sampling/removal could not be conducted until another power outage. <p>In January 2000, follow-up soil characterization sampling was conducted in the general vicinity of the 1999 samples. On 10 January 2000, twenty-two samples were collected and tested; see the document (Q15_Rivergate_01-10-2000.pdf) attached in response to Question 15. Twenty-one of the samples had PCB concentrations ranging from non-detect to 1 ppm. One sample collected from a location adjacent to Capacitor Bank 1 had a detected concentration of 9,200 ppm. An initial cleanup was performed in which soil was removed followed by the collection of 7 confirmation samples from around Capacitor Bank 1; see the document (Q15_Rivergate_01-14-2000.pdf) attached in response to Question 15. Five of the seven confirmation samples had PCB concentrations ranging from 0.27 ppm to 9.3 ppm and two samples had concentrations of 43 ppm and 510 ppm. Additional cleanup was performed with the removal of more soil followed by the collection</p>	<p>Question 72 Attachments Q72_RivergateN 06 Asb Sur.pdf Q72_RivergateS 06 Asb Sur.pdf</p> <p>Also see Question 6 Attachment Q06h_Rivergate1989 Int HS Sur.pdf</p> <p>Also see all Question 15 Attachments</p> <p>Also see Question 21 Attachment Q21a_Waste Stream Summary.pdf Q21c_Rivergate North_Haz Mat. Manifest_01-2000.pdf Q21a_RS 1987-05-14_oil soaked gravel transport.pdf Q21a_RS 1986-9-17_failed cap.pdf</p> <p>Also see all Question 62 Attachments</p>

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	<p>of two confirmation samples around the two highest PCB locations; see the document (Q15_Rivergate_01-19-2000.pdf) attached in response to Question 15. These two confirmation samples had detected PCB concentrations of less than 3 ppm. From the cleanup of the spill, a total of 23,940 kg of PCB contaminated soil, gravel, and debris was removed from the Rivergate North Substation and disposed of at the Arlington Landfill; see the hazardous waste manifest (Q21a_Rivergate North_Haz Mat. Manifest_01-2000.pdf) attached in response to Question 21a.</p> <ul style="list-style-type: none"> • 8 August, 2005 – Approximately 2 gallons of PCB-containing (≥ 50 ppm) oil from a capacitor was released onto the soil, gravel, and capacitor bank steel structure; see the document (Q62_08-08-2005_Rivergate North.pdf) attached in response to Question 62. Analysis of the oil indicated that it contained 800,000+ ppm PCBs. The spill was cleaned up immediately and the waste (approximately 5 cubic feet of soil, gravel, and concrete, as well as clean-up material) was placed in drums. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the approximately 5 cubic feet of PCB- and petroleum hydrocarbon-contaminated soil/gravel/concrete was likely taken to PSC for interim storage where it was comingled with other ≥ 50 ppm PCB-contaminated material before disposal at the Arlington Landfill. • 20 October 2005 – Gravel sampling was conducted on the stained surface of the street in front of (outside of) the Rivergate North Substation. A gravel sample was tested for petroleum hydrocarbons, select solvents, and PCBs; see the document (Q15_Rivergate_10-20-2005.pdf) attached in response to Question 15. Although petroleum hydrocarbons were detected, PCBs and the selected solvents were non-detect. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, this petroleum hydrocarbon-contaminated gravel was likely disposed of at the Hillsboro Landfill under one of PGE's general disposal permits (see the documents attached in response to Question 52) after interim storage at a PGE waste and material handling facility. <p><u>Rivergate South Substation:</u></p> <ul style="list-style-type: none"> • 16 March 1987 – Oil-soaked gravel was excavated from the Rivergate South Substation; see the attached document (Q21a_RS 1987-05-14_oil soaked gravel transport.pdf). To the best of PGE's knowledge, after reasonable inquiry, the gravel was contaminated with PCB-containing petroleum hydrocarbons due to a failed capacitor (part of capacitor bank #5); see the attached document (Q21a_RS 1986-9-17_failed cap.pdf). The excavated gravel was transported to Sellwood Substation (a historical PGE waste and handling facility) for interim storage. It was placed in a drop-box on 16 March 1987 for pickup and disposal by Chem-Securities at a Chem-Securities landfill appropriate for the PCB content of the gravel. To the best of PGE's knowledge, after reasonable inquiry, PGE does not have further information or analytical data relating to this remediation. • 19 June 1989 – Seventy-five gallons of insulating oil were released from a transformer 	

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	<p>tagged as <1ppm PCB; see the document (Q62_1989-6-19_Rivergate spill.pdf) attached in response to Question 62. The release occurred as the transformer was being reinstalled (it had recently been factory repaired). The transformer was supposed to have been shipped to PGE empty; however, when PGE personnel opened it up to set taps and fill with oil, oil spilled out and onto the substation gravel. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Question 21a, the oil-contaminated gravel was likely disposed of at the Hillsboro Landfill after interim storage at a PGE waste and material handling facility.</p> <ul style="list-style-type: none"> • 25 August 1994 – Oil from a transformer radiator spilled onto the concrete and adjacent gravel surface, encompassing an area of approximately 2 ft by 8 ft; see the document (Q62_08-25-1994_Spill Cleanup_Maint Request_RivergateS.pdf) attached in response to Question 62. The spill was reported to the PGE System Control Center, contained, and cleaned up (including the removal and disposal of contaminated gravel and soil). To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q21a_Waste Stream Summary.pdf) attached in response to Quesiton 21a, the approximately 16 square feet of oil-contaminated soil/gravel was disposed of at the appropriate landfill based on PCB-content after interim storage at a PGE waste and material handling facility. <p>As discussed in response to Question 6h, unidentified individual(s) engaged in illegal dumping of waste at the property boundary between Parcel IV and the BPA property to the east. To the best of PGE's knowledge, after reasonable inquiry, the following summarizes the unauthorized dumping of waste by unknown individuals at the property boundary between Parcel IV and BPA's property. In 1989, PGE was conducting a property line survey when the unauthorized disposal of an unidentified waste was discovered at the property boundary between Parcel IV and BPA; see the document (Q06h_Rivergate1989 Int HS Sur.pdf) attached in response to Question 6h. PGE and BPA jointly conducted a survey of the unauthorized disposal area and found 12 to 15 unlabeled plastic containers containing clear or yellowing liquid, as well as other medical type wastes, on either side of the east fence between PGE and BPA properties, as well as in an unoccupied one room building about 20 yards to the southeast of the fence on BPA property. To the best of PGE's knowledge, after reasonable inquiry and based on the document (Q06h_Rivergate1989 Int HS Sur.pdf) attached in response, BPA removed the hazardous waste.</p> <p>Also see the attached documents (Q72_RivergateN 06 Asb Sur.pdf and Q72_RivergateS 06 Asb Sur.pdf) contain information on the asbestos surveys conducted at the Rivergate Sustations. The surveys found material in both substation control houses that contained or were assumed to contain asbestos. To the best of PGE's knowledge, after reasonable inquiry, no remedial action has been taken concerning asbestos.</p>	

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<p>73. Are you or your consultants planning to perform any investigations of the soil, water (ground or surface), geology, and hydrology or air quality on or about the Property? If so, identify:</p> <p>a. what the nature and scope of these investigations will be;</p> <p>b. the contractors or other persons that will undertake these investigations;</p> <p>c. the purpose of the investigations;</p> <p>d. the dates when such investigations will take place and be completed; and</p> <p>e. where on the Property such investigations will take place.</p>	<p>No future investigations for the Rivergate Substations are planned. Soil confirmation sampling may be conducted in the future, after cleanup of small spill events and general operational activities (e.g., removal, updates, maintenance) on an as needed basis.</p>	
<p>Section 8.0 - Corporate Information</p>		
<p>74. Provide the following information, when applicable, about you and/or your business(es) that are associated with each Property identified in response to Question 4:</p>		
<p>a. state the current legal ownership structure (e.g., corporation, sole proprietorship);</p>		
<p>b. state the names and current addresses of all current and past owners of the business entity or, if a corporation, current and past officers and directors;</p>		
<p>c. discuss all changes in the business' legal ownership structure, including any corporate successorship, since the inception of the business entity. For example, a business that starts as a sole proprietorship, but then incorporates after a few years, or a business that is subsequently acquired by and merged into a successor. Please include the</p>	<p>Responses and documents for Section 8.0 – Corporate Information for all PGE sites are provided in a supplemental submittal (Supplemental Submittal S1).</p>	

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<p>dates and the names of all parties involved;</p> <p>d. the names and addresses of all current or past business entities or subsidiaries in which you or your business has or had an interest that have had any operational or ownership connection with the Properties identified in response to Question 4. Briefly describe the business activities of each such identified business entities or subsidiaries; and</p> <p>e. if your- business formerly owned or operated a Property identified in response to Question 4, describe any arrangements made with successor owners or operators regarding liability for environmental contamination or property damage.</p> <p>75. List all names under which your company or business has ever operated and has ever been incorporated. For each name, provide the following information:</p> <p>a. whether the company or business continues to exist, indicating the date and means by which it ceased operations (e.g., dissolution, bankruptcy, sale) if it is no longer in business;</p> <p>b. names, addresses, and telephone numbers of all registered agents, officers and operations management personnel; and</p>		

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c. names, addresses, and telephone numbers of all subsidiaries, unincorporated divisions or operating units, affiliates, and parent corporations if any, of the Respondent.		
d. all information requested in (a) through (c) above regarding, but not limited to, the following entities and including their relationship to Respondent (e.g. whether these entities are business partners, separate entities, subsidiaries, and/or aliases etc. of Respondent):		
i. V & K Service, Inc.; and		
ii. Jinkz Corp.		
76. Provide all copies of the Respondent's authority to do business in Oregon. Include all authorizations, withdrawals, suspensions and reinstatements.		
77. If Respondent is, or was at any time, a subsidiary of, otherwise owned or controlled by, or otherwise affiliated with another corporation or entity, then describe the full nature of each such corporate relationship, including but not limited to:		
a. a general statement of the nature of relationship, indicating whether or not the affiliated entity had, or exercised, any degree of control over the daily operations or decision-making of the Respondent's business operations at the Site;		

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<p>b. the dates such relationship existed;</p> <p>c. the percentage of ownership of Respondent that is held by such other entity(ies);</p> <p>d. for each such affiliated entity provide the names and complete addresses of its parent, subsidiary, and otherwise affiliated entities, as well as the names and addresses of each such affiliated entity's officers, directors, partners, trustees, beneficiaries, and/or shareholders owning more than five percent of that affiliated entity's stock;</p> <p>e. provide any and all insurance policies for such affiliated entity(ies) which may possibly cover the liabilities of the Respondent at each Property; and</p> <p>f. provide any and all corporate financial information of such affiliated entities, including but not limited to total revenue or total sales, net income, depreciation, total assets and total current assets, total liabilities and total current liabilities, net working capital (or net current assets), and net worth.</p> <p>g. all information requested in (a) through (f) above regarding, if applicable, but also explain any corporate or financial relationship Respondent may have had or has with the Enron Corporation.</p>		

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<p>78. If Respondent is a partnership, please describe the partnership and provide a history of the partnership's existence. Provide a list of all current and past partners of any status (e.g., general, limited, etc.) and provide copies of all documents that created, govern, and otherwise rules the partnership, including any amendments or modifications to any of the originals of such documents, and at least five years of partnership meeting minutes.</p>		
<p>Section 9.0 - Compliance With This Request</p>		
<p>79. Describe all sources reviewed or consulted in responding to this request, including, but not limited to:</p>		
<p>a. the name and current job title of all individuals consulted;</p>	<p>Ron Parr, Facility Management Supervisor Bob Millican, Facility Management Specialist Randy Nicolay, Facility Management Specialist Dave VanBossuyt; Distribution Administration Manager Mark Cooksey, IT Client Services Manager Laura Holgate, Power Supply Eng Services Supervisor Jeddy Beasley, Transportation Services Manager Jayne Allen, Environmental Services Specialist Arya Behbehani-Divers, Environmental Services Manager Brandy Horn, Environmental Services Specialist Mike Livingston, Property Services Manager Tim Calhoun, Network Communications Supervisor – retired Mike Schwartz, Power Supply Eng Services General Manager Rand Sherwood, Utility Services Manager Tom Stodd, Environmental Services Specialist Bob Lazrine Special Tester Forman Sid Hiller – Manager Kristina Rodgers – Assistant Debby Klinger – Specialist Chuck McCartney – Specialist Alma McGloghlon – Analyst Larry Morgan – Supervisor Gwen Williams - Manager</p>	<p>Question 79 Attachment Q79_PdxHarbor Contact Information Rev.pdf</p>

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	In addition, the attached document contains additional sources consulted for responses to selected questions.	
b. the location where all sources reviewed are currently reside; and	<p>PGE's Office at: 121 SW Salmon, 1WTC1302, Portland, Oregon 97204. Records are contained in the Facilities Management Departments, the Human Resources Department, and in the Corporate Records Information System (CRIS) database.</p> <p>In addition, the Hawthorne Retiree Museum contains the following:</p> <ul style="list-style-type: none"> • The History of Portland General Electric Company, 1889 - 1981 • <u>Electrifying Eden</u> by Craig Wollner <p>The History of Portland General Electric Company, 1989 - 1981 is attached in response to Question 77, which is part of the Supplemental Submittal S1. A hardcopy of <u>Electrifying Eden</u> is provided in a separate submittal.</p>	
c. the date consulted.	Work on this information request was performed from February 2008 through April 2009.	
80. If not already provided, identify and provide a last known address or phone number for all persons, including Respondent's current and former employees or agents, other than attorneys, who have knowledge or information about the generation, use, purchase, storage, disposal, placement, or other handling of hazardous materials at, or transportation of hazardous substances, waste, or materials to or from each Property identified in response to Question 4.	The Rivergate Substations are unmanned substations, requiring only periodic maintenance and monthly inspections. See responses and documents for Questions 2, 6g, 21, 38, 40, and 79.	<p>See Question 6 Attachments Q06g_Bullseye articles.pdf Q06g_Organizational Charts.pdf Q06g_Distribution and System Planning Information.pdf Q06g_HRIC Structure Report 2008.pdf Q06g_HRIC Structure Info 1982-2007.pdf</p> <p>Also see all Question 21 Attachments</p> <p>Also se all Question 38 Attachments</p> <p>Also see Question 40 Attachment Q40_Waste-Materials Receivers and Carriers.pdf</p> <p>Also see Question 79 Attachment Q79a_PdxHarbor Contact Information Rev.pdf</p>
81. If any of the documents solicited in this information request are no longer available, please indicate the reason why they are no longer available. If the	PGE Records Management Services (RMS) provides a uniform records management program for the company. The program includes the Corporate Records Information System (CRIS) an online application used by departments to identify, index and manage their records. RMS also provides records storage and retrieval and document imaging services.	

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records were destroyed, provide us with the following;	<p>RMS can investigate why records are no longer available if we know which records are being sought. Knowing the date, originator and subject of the records in question are essential to determine their availability or their ultimate disposition.</p> <p>Each unique record category is identified in CRIS and assigned a file pattern code (file category). Information about each file category includes the office of record (originator), and retention requirements and regulatory citations – who requires the record to be kept and for how long. The PGE records program and records retention schedule comply with the recordkeeping requirements of the Oregon Public Utility Commission (PUC) and Federal Energy Regulatory Commission (FERC).</p> <p>State and federal guidelines require us to identify which records PGE produces and how and for how long those records will be retained. PGE Policy requires that records should not be destroyed before, or kept after, meeting retention requirements. Consequently, PGE regularly destroys records in the normal course of business, and when legally required to do so. Such destructions are approved by the PGE Records Retention Committee and authenticated and recorded by RMS.</p> <p>How long a particular type of record is retained is based on operating needs, legal and regulatory requirements and, in a few cases, historical or archival value.</p>	
a. the document retention policy between 1937 and the present;	RMS was created in 1977 and we can provide PGE's records management guidelines from 1977 to the present. Prior to that time records management was the responsibility of each functional area, plant or division office. Accounting records were kept in compliance with 18 CFR Part 125, Regulations to Govern the Preservation of Records of Public Utilities and Licensees (1972), issued by the Federal Power Commission (now FERC) and NARUC, the Nat'l Assoc. of Regulatory Utility Commissioners.	
b. the approximate date of destruction;	See response to Question 81a, above. Since it was established (c. 1977) RMS has maintained a hardcopy or microfilm record of boxes of records destroyed in the normal course of business, if those records were turned over to RMS custodianship. To know <i>when</i> a record was destroyed, it is necessary to know the record category, the approximate date of creation, and which department created it. It should be noted that the level of detail of information about the records destroyed is the same as that used to identify the records when they were sent to storage.	
c. a description of the type of information that would have been contained in the documents;	See response to Question 81b, above. RMS can help discern what records were typically filed in a particular file category. If similar records from that era exist, they may show what information was captured by the documents. For example, a typical "job" form from 1980 would include much the same information listed on a similar job form from 1940, i.e., the work location, equipment used, labor hours, parts, drawings, etc.	

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<p>d. the name, job title and most current address known by you of the person(s) who would have produced these documents; the person(s) who would have been responsible for the retention of these documents; the person(s) who would have been responsible for destroying the documents; and the person(s) who had and/or still have the originals or copies of these documents; and</p>	<p>RMS is responsible for all records sent to the records center from 1977 to present, including ultimate disposition of those records. Records of documents destroyed include the names of the originator, authorizations for destruction (signatures) and the name of the person who physically destroyed or recycled the documents. Individual Responsibility Center (RC) managers are and would have been responsible for maintaining and disposing all other records, i.e., those that were not sent to the archives.</p>	
<p>e. the names and most current addresses of any person(s) who may possess documents relevant to this inquiry.</p>	<p>RMS can provide printed reports from the CRIS of existing records related to the request (that have been entered into CRIS by the originating RC). CRIS shows the names of all departments using the system for managing their records, what categories of records are maintained and where the records are filed (in the department or the records storage center).</p> <p>On request, RMS can provide a list of all RCs that use the CRIS system. This report would show each RC's file plan by document type (or subject) and the types of documents that should be filed under those headings.</p>	
<p>82. Provide a description of all records available to you that relate to all of the questions in this request, but which have not been included in your responses.</p>	<p>Multiple key word searches were performed in PGE's CRIS system. No date restrictions were placed on the searches. The results from each key word search were printed from the CRIS system with either a list of record titles or a "There are no entities to display" message. The "There are no entities to display" message means that based on the search query no records were found. Individual CRIS printouts are available upon request but provide no additional information.</p> <p>Documents not included in this request are:</p> <ul style="list-style-type: none"> • Documents describing other PGE sites • PGE internal emails, correspondences, documents not specifically relevant to these questions • Documents determined to be Attorney-Client privileged, which are identified on the comprehensive privilege log that will be submitted with the final set of responses. • Duplicate documents/figures • Database of OSHA reportable accidents/injuries for PGE properties in Oregon 	